

# CIVIL SERVICES EXAMINATION focus

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analysis & explanation  
of relevant news

## ETHICS, INTEGRITY & APTITUDE

Coverage from  
varied  
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## ESSAYS OF THE MONTH

Selected essays  
from Rau's  
GSI students

MARCH  
2024



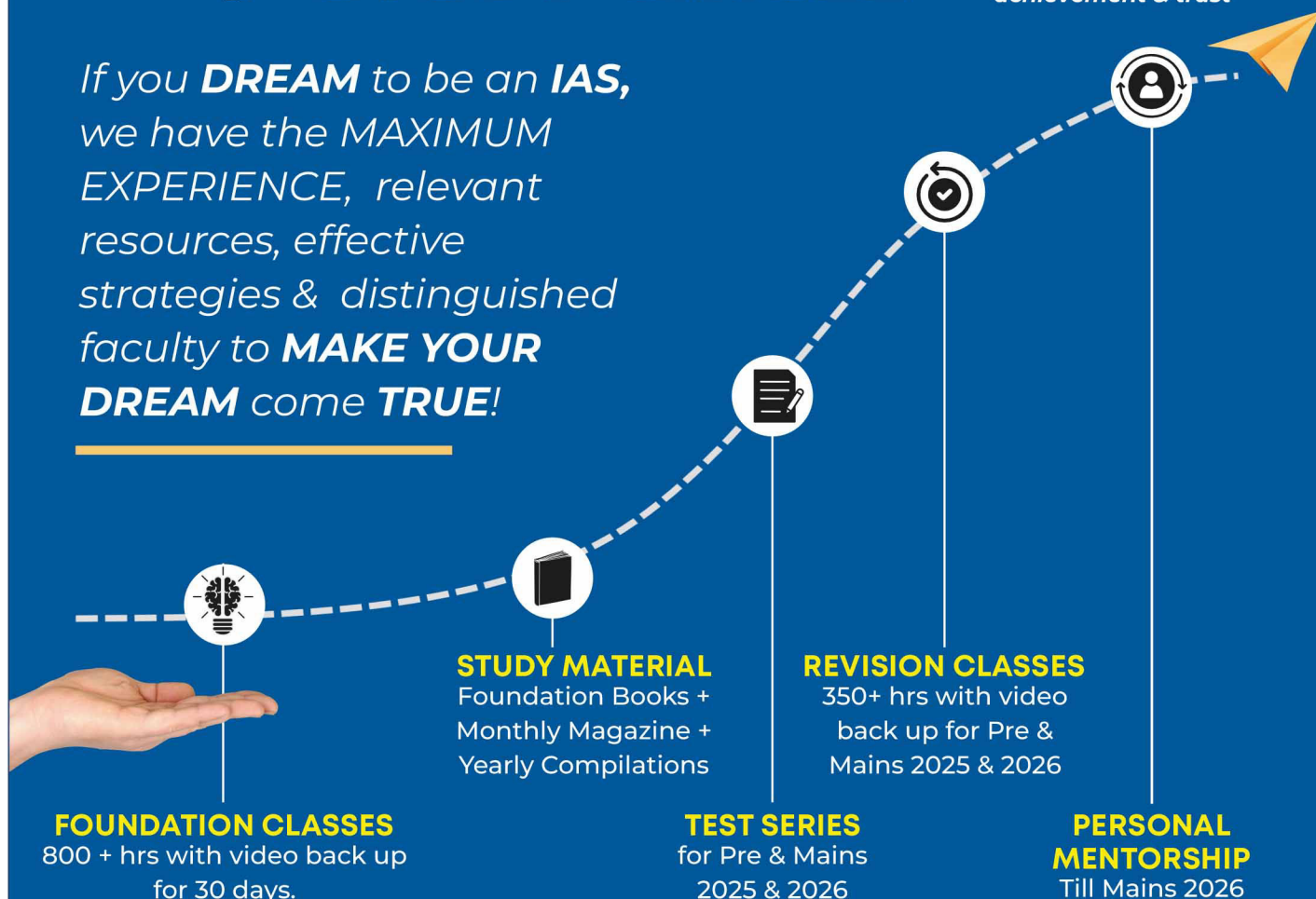
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June Session

**14**  
JUNE

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Regular Morning

**5**  
APR

Regular Evening

**19**  
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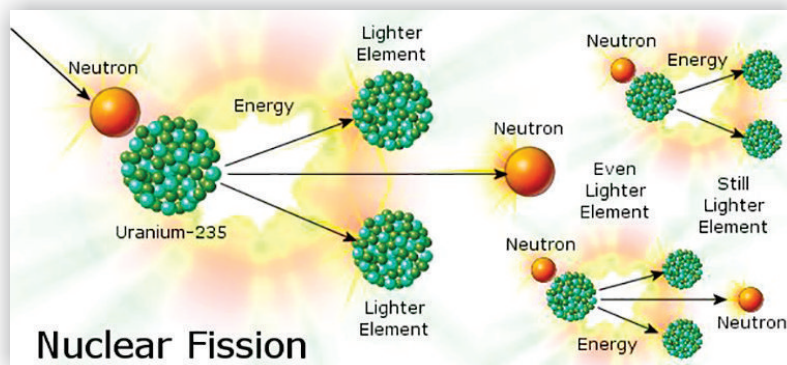
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*editorial  
note*



## Core Loading of India's Fast Breeder Reactor

In the hustle and bustle of elections, it is very natural that a significant achievement of India's science & technology landscape and future energy security gets lost in the public imagination. This event was commencement of 'Core Loading' at India's first indigenous prototype Fast Breeder Reactor with a capacity of 500 MW at Kalpakkam in Tamil Nadu. This event marks the entry into second phase of India's three stage nuclear program.

To understand the significance of this achievement, we need to understand the basics of India's three stage nuclear program. When India attained Independence, opinion surrounding nuclear technology and its use cases was very polarized. The US had just used two atomic bombs to nearly annihilate Japanese cities of Hiroshima & Nagasaki. The immense human misery and destruction in these cities meant that a large section of opinion started viewing nuclear technology as evil.

However, there was another section of opinion which still viewed the technology as morally neutral and wanted to explore its possibilities for human good. Among the pioneers was Mr. Homi Jehangir Bhabha who was one of the pioneers of India's nuclear program. Bhabha with the support of PM Jawahar Lal Nehru established Atomic Energy Commission (AEC). India took a great leap forward when Apsara, India's first nuclear reactor achieved criticality in 1956.

The basic rationale behind India's three stage nuclear program was optimum utilisation of India's nuclear resources. India has been endowed with modest domestic uranium resources; however, we had abundant Thorium

resources scattered across India's coasts (about two-thirds of world's Thorium reserves). However, Thorium is not fissile in nature. Thus, the basic idea was to convert Thorium to a Uranium-233 in a reactor, thus paving way for large scale deployment of nuclear energy to meet the vast energy needs of the country. The three-stage nuclear programme is sequential in nature and with each stage having fuel cycle linkages in which spent fuel from one stage is reprocessed to obtain fuel for the next stage.

**The first stage of India's three stage nuclear program is Pressurized Heavy Water Reactors (PHWRs)** which is based on natural Uranium-235 as fuel. Natural Uranium is U-238 with a miniscule quantity of U-235. U-235 is the fissile material which is consumed fully in this stage and reaction produces Plutonium-239 and energy. The coolant used in this reactor is heavy water which considerably slows down the neutrons.

**The second stage of India's nuclear program is based on Fast Breeder Reactors (FBRs).** The basic idea of this stage is producing more nuclear fuel than what it consumes. This stage consumes a mixture of Plutonium-239 and Uranium-238 as fuel (Uranium-Plutonium Mixed Oxide (MOX) fuel). Uranium-238 'blanket' surrounding the fuel core will undergo nuclear transmutation to produce more fuel, thus earning the name 'breeder'. Breeder reactors require fast neutrons to breed more Plutonium. Thus, the coolant these reactors use is liquid sodium.

**The third stage of India's nuclear program** focused on building Advanced Heavy Water Reactor (AHWR) reactors for utilisation of Thorium. This involves a self-sustaining



series of Thorium 232 and Uranium 233. This would be a thermal breeder reactor, which can refuel after its initial charge – using only naturally occurring Thorium. To showcase the practicality of this phase, 40 kW Thorium based **KAMINI reactor** is already operational in Kalpakkam. BARC has also designed 300 MW Advanced Heavy Water Reactor (AHWR) which has been designed to demonstrate large-scale use of Thorium for generation of commercial nuclear power.

### India's tryst with operationalizing second-stage of nuclear program

India's plan to build the Fast Breeder Reactor has run into numerous delays and cost overruns. Initially, sanctions against nuclear program stalled its progress and then due to delay in orders.

Government of India formed a dedicated organisation known as Bhartiya Nabhiya Vidyut Nigam Ltd (BHAVINI) to construct and operate India's most advanced nuclear reactor-Prototype Fast Breeder Reactor (PFBR) in 2003.

After the success of this, Department of Atomic Energy has proposed building four more FBRs of 600 MW capacity.

### Significance of 'Core Commencement' of Fast Breeder Reactors

The use of Thorium-232, which in itself is not a fissile material, as a blanket is also envisaged in this stage. By transmutation, Thorium will create fissile Uranium-233 which will be used as fuel in the third stage. FBR is thus a stepping stone for the third stage of the program paving the way for the eventual full utilization of India's abundant thorium reserves.

Also, since the prototype Fast Breeder Reactor uses the spent fuel from the first stage, this stage will also lead to significant reduction in nuclear waste generation and its storage. Thus, avoiding the need for large geological disposal facilities.

To add to this, despite the advanced technology involved, both the capital cost and the per unit electricity cost is comparable to other nuclear and conventional power plants.

### Challenges with Stage-II

Firstly, the basic rationale behind going for the three-stage

nuclear program and specifically the breeder reactors was that India had limited uranium resources. However, with ever expanding discovery of domestic natural uranium in India (Tumulpalle etc.) and waiver from the Nuclear Suppliers Group means that it is no longer difficult to source Uranium for conventional PHWRs in India for meeting its domestic needs.

To add to this is the rise of Small Modular Reactors (SMRs) which have a maximum capacity of 300 MW requiring less land and reduced cost and can work with low-enriched uranium.

Secondly, continuous decline in the prices of renewable energy sources (Solar & Wind energy) means that these sources of energy are now cheaper as compared to nuclear power. This has resulted in critics to arguing for stopping further development of nuclear power.

Thirdly, the nuclear waste produced in the Thorium fuel cycle contains Caesium-137, Actinium-227, Radium-224, Radium-228 and Thorium-230. All these are radioactive and demand additional investment in nuclear waste handling.

Fourthly, the liquid sodium used as coolant in the FBRs reacts violently with water and burns if exposed to air. Thus, any leaks in the systems can result in a major sodium-water fire. The necessity of keeping air away from sodium makes refueling and repair of these reactors much more difficult.

Fifthly, the accident at Fukushima Nuclear Power plant and the management of its waste have created a worldwide public opinion against nuclear power. There has been continued safety concerns in the people living in areas close to Kalpakkam. To add to this India's nuclear regulatory regime wherein the current regulator Atomic Energy Regulatory Body (AERB) is not independent by statute and reports ultimately to the Department of Atomic Energy leading to conflict of interests. IAEA has urged India to establish an independent statutory atomic regulator for greater trust and accountability in the entire nuclear value chain.

However, these challenges can be met with greater technological focus and investments. However, the benefits of nuclear power as a source of clean energy, particularly base load power to complement other renewable energy sources such as solar and wind energy holds much promise. The potential of nuclear power has also been recognised by environmentalists. In this respect, India's achievement of commencement core loading of Fast Breeder Reactor is significant and must be appreciated.

Regards  
**JAIKRIT VATSAL**  
Executive Editor,  
Focus Magazine



# focus

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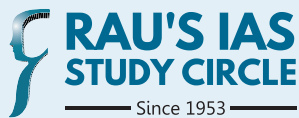
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The sources relied for selection and analysis of issues are:

- |                                  |                       |
|----------------------------------|-----------------------|
| 1. The Hindu, The Hindu (Sun.)   | 2. The Indian Express |
| 3. The Times of India            | 4. Asian Age          |
| 5. The Tribune                   | 6. The Economic Times |
| 7. Hindu Business Line           | 8. Frontline          |
| 9. Economic and Political Weekly | 10. IDSA              |
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The publication, as the name suggests, focuses solely on issues which are relevant to the **factual** as well as **applied** aspects of the General Studies' syllabus. That is how Focus covers all anticipated issues and themes for the upcoming Civil Services Examination (CSE).

### Features

#### PART ONE | CURRENT AFFAIRS ANALYSIS

- This month edition covers analysis of news from the immediately preceding month.
- All news/issues are categorized and clubbed syllabus-wise (International Relations, Polity & Governance, Science & Technology, Ethics, Integrity & Aptitude and so on) for efficient study.
- Background information has been added to provide context.
- Related and Additional information-dimensions have been explained to add depth to your understanding.
- Maps and figures have been provided for associative and retentive learning.
- Practice Questions

#### PART TWO | ETHICS, INTEGRITY & APTITUDE

- Coverage from varied sources

#### PART THREE | ESSAYS FOR YOU

- Selected essays from Rau's GSI students

For further understanding or discussion in any topic, please consult your respective professors.

**Good Luck!**

**RAU'S IAS STUDY CIRCLE**

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**logical .simple .targeted  
analysis & explanation  
of all relevant news of the month**



# ECONOMIC DEVELOPMENT

# GS PAPER (PRELIMS) & GS PAPER III (MAIN)

## DEMANDS FOR LEGALISING MINIMUM SUPPORT PRICE (MSP)

#AGRICULTURE #FOODSECURITY

PRIMARY  
SOURCE The Indian  
EXPRESS

Farmers have been long demanding the legal guarantee for Minimum Support Price (MSP).

### WHO NOTIFIES MSP?

Cabinet Committee on Economic Affairs (CCEA) notifies MSP based on the recommendations of the Commission on Agricultural Costs and Prices (CACP). As of now, CACP recommends MSPs of 22 commodities

### HOW IS MSP FIXED? DIFFERENT APPROACHES

- **A2 Method:** Expenditure on various inputs paid by farmers such as Seeds, Fertilisers, Pesticides etc.
- **A2+ FL Method:** Expenditure on various Inputs + Implied cost of Family labour
- **C2 Method:** A2+FL+ Implied cost of rent of land + all other implied costs. (Recommended by M.S. Swaminathan Committee)

**Present Method:** A2+FL Method (1.5 times the production cost)

### PRESENT STATUS OF MSP

Presently, MSP does not enjoy statutory recognition. This means:

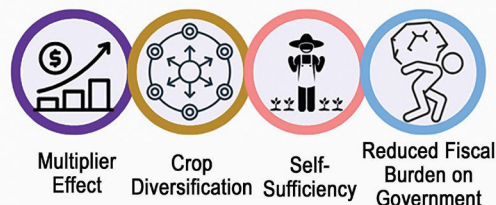
- No Obligation on the Government to purchase all the commodities for which MSP is declared.
- No Obligation on the Government to pay MSP to the farmers.
- No Obligation on the private sector to purchase commodities at MSP. Private sector can purchase below MSP.

### MAJOR DEMANDS BY FARMERS

- **MSP should be based on the comprehensive cost of production (C2)**, as determined by the Commission for Agricultural Costs and Prices (CACP), plus 50%, as recommended by the Swaminathan Commission.
- **Thus, 23 crops for which MSP is announced should be legally purchased at or above the MSP price** by anyone who "willingly enters" the market. Legalisation of MSP would ensure that the private sector would buy commodities at MSP. Failure to do so would attract a penalty.

### BENEFITS OF LEGALLY GUARANTEED AND INCREASED MSP

#### Benefits of Legal Backing & Increased MSP



- **Multiplier effect:** If this money flows to the farmers, **they will spend it and thus create more demand** in the market. Due to the multiplier effect, this will lead to an increase in employment, investment and eventually government taxes.
- **Crop Diversification:** All 22 crops being legally sold at MSP will also lead to crop diversification, which is the focus of the recent offer from the government. Since there would be **no incentive to grow only those crops where MSP is now available — mostly paddy and wheat** - it will lead to various economic and ecological benefits.
- **Self-Sufficiency:** Legal MSP would be a great instrument to control the production quantities of various crops to match demand. The country would also become self-sufficient in edible oils and pulses if we ensure remunerative MSP for these crops.
- **Reduced Fiscal Strain on the Government:** If the government and private prices for the crops are the same, farmers won't seek out the government to

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**ECONOMIC DEVELOPMENT**

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purchase their crops. So, the Centre will not be financially burdened by having to purchase more quantities than it requires. This will lead to a reduction in government purchase, storage and redistribution costs for these crops. The **savings will help lower the fiscal deficit** and improve government finances.

**CHALLENGES AND CONCERNS**

- **Goes Against Interest of Farmers:**

- In the event of bumper harvest, prices of the commodities would fall below MSP. During such times, the private sector may not procure the commodities fearing penalty.
- Higher procurement of Food grains by FCI → Surplus stock → Dumping of surplus in open market → Decrease in prices Traders would buy commodities from FCI and not farmers.
- Legalisation of MSP will encourage over-production of Rice and Wheat → Environmental cost (such as Decline in Soil fertility, depletion of ground water etc.) → Decline in income levels of farmers.

- **Adverse Impact on Economy:**

- Higher costs of procurement due to a statutory MSP will increase the food prices, leading to inflation in the economy Higher prices of commodities would adversely affect exports of agricultural commodities.
- Financing needs would amount to half of the Government's Budget.

- **Unsustainable Food grain Management Policy:** The Food subsidy bill has already become quite unsustainable at around Rs 2 lakh crores. The excess procurement of food grains by the FCI has led to surplus buffer stocks leading to higher storage costs and wastages. Legalisation of MSP would further worsen the scenario.

- **Administrative Challenge:** Lack of government machinery to procure all crops that are under the MSP system.

- **Violation of WTO Agreement on Agriculture (AoA):** Legalisation of MSP would further violate the limit on the subsidies under AoA and it can be challenged by other countries. India's quest for Permanent solution on public stockholding could be in jeopardy.

- **Promote Inequality:** Only 6% of farmers are able to benefit from the MSP. Similarly, most of the Rice and

Wheat are sourced from states such as Punjab, Haryana, MP etc. Hence, legalisation of MSP could worsen socio-economic inequality and promote regional disparity.

**CONCLUSION**

The Government can explore a range of alternative measures in lieu of Minimum Support Price (MSP). These measures include providing farmers with remunerative prices for their agricultural produce, allowing market forces to determine prices, and establishing mechanisms to protect farmers from price fluctuations, such as government interventions when commodity prices rise. This implies that price determination is predominantly driven by market forces, and government intervention should occur only when prices deviate far beyond the standard deviation.

## HOUSEHOLD CONSUMPTION EXPENDITURE SURVEY

#ECONOMY #MOBILISATIONOFRESOURCES

PRIMARY SOURCE mospi.nic.in

SECONDARY SOURCE The Indian EXPRESS

National Sample Survey Office (NSSO) has released summary results of Household Consumption Expenditure Survey (HCES) 2022-23 in a form of factsheet.

**HOUSEHOLD CONSUMPTION EXPENDITURE SURVEY**

- Household Consumption Expenditure Survey (HCES) is a **quinquennial survey** (conducted every five years) by **National Sample Survey Office (NSSO)**, Ministry of Statistics and Programme Implementation.
- It **collects information about the consumption of goods and services** by the households.
- It also collects some auxiliary **information on household characteristics and demographic particulars of the households**.
- This **information is invaluable to policymakers** because of its **wide coverage**, covering the whole of the Indian Union (except a few inaccessible villages in the Andaman and Nicobar Islands) and has a **big sample size comprising 2.6 lakh households**. Of these, 1.5 lakh are from rural areas and 1.1 lakh from urban areas.

## ECONOMIC DEVELOPMENT

- The latest survey was **released after a decade** because the previous household consumption survey conducted in 2017-18 was scrapped.

### WHY DO WE NEED SUCH SURVEYS?

- Information collected in HCES is **useful for understanding the consumption and expenditure pattern, standard of living and well-being of the households.**
- The data of HCES **provides budget shares of different commodity groups** that are **used for preparation of official Consumer Price Indices (CPIs).**

### MAJOR FINDINGS

- **Decline in Food Spending:** Indians have been **consistently spending less on food.** The expenditure on food dropped below 50% of the total consumption expenditure in rural India and below 40% in urban India. This marks a **significant shift in spending patterns.**
- **Moving Beyond Cereals:** Expenditure on cereals was almost 22% of the total consumption expenditure in rural households in 1999-2000; it is now down to 4.91%. In urban households, it **has reduced** from 12% to 3.64% in the same period.
- **Spending More on Foods having High-value & Nutritional Items:** In 1999-2000, rural households spent 11.21% of the total consumption spending on **items such as eggs, fish and meat, and fruits and vegetables,** and urban households spent 10.68%. In 2022-23, this was significantly higher for rural households at 14%, and only marginally higher for urban households at 11.17%.
- **Lowering Rural-Urban Divide:**
  - India's **average monthly spending more than doubled** - both for the rural and the urban areas. **Rural Indians have been spending a lot more** than a decade ago. The rural average monthly consumption spending for one person went from ₹1,430 in 2011-12 to ₹3,773 in 2022-23, **an increase of 163.84%.** This **indicates an improvement in the standard of living in rural households.**
  - On the other hand, **urban spending rose 145.58%** to ₹6,459 in 2022-23.
  - Another positive outcome of the survey is that the **difference between how much rural and urban households are spending has decreased.**

- The difference in monthly per capita consumption expenditure (MPCE) between rural and urban households decreased from 83.91% in 2011-12 to 71.19% in 2022-23.
- This means that **consumption expenditure in rural areas has been growing at a faster rate than urban areas** during the 11-year period.

### • Rising Inequality:

- Rural and urban households might be spending higher but the **difference between the bottom-most and the top-most strata is alarming.**
- The bottom 5% in rural areas spend ₹1,373 per month on consumption, while the top 5% spend ₹10,501. At the same time, the bottom 5% in urban areas spend ₹2,001, the top 5% spend ₹20,824.
- Hence, it can be said that the **MPCE of the top 5% of rural population is 7.65 times more than its bottom 5%, the MPCE of the top 5% of urban population has an MPCE of over 10 times its bottom 5%.**

### SIGNIFICANCE

### • Reviewing Inflation Indexes:

- The retail inflation is gauged from Consumer Price Index (CPI). The CPI is based on a basket that was decided in 2012. But over the last 11 years, the consumption pattern has changed.
  - For example, the CPI (Rural) basket assigns a weightage of 12.35% to 'cereals and products'. But as the latest HCE Survey shows, rural households spend just 4.91% on cereals and their substitutes.
  - The share of expenditure on food in rural households is 46.38%, according to the Survey. But food in the CPI (Rural) basket has a weightage of 54.18%.
- Hence according to the HCES, **the figures assigned to food are much higher than what a rural consumer now spends.**
- Therefore, it is necessary to make changes in the weightage of different commodity groups of the CPI basket by following the trends highlighted above. This will **ultimately help the RBI to review accurately the changes in inflation and then enable it to react accordingly in terms of making necessary changes in its monetary policy decisions.**



## ECONOMIC DEVELOPMENT

- **Rising Aspirations:** Decline in food spending means that Indians are left with more money for various purposes, such as purchasing consumer durables, clothing, footwear, fuel, entertainment and other lifestyle expenditures.
- **Preference to Nutrition:** The spending on high-value/ nutritional items such as eggs, fish and meat, and fruits and vegetables has gone up more in rural households than in urban households over the last two decades.
- **Inclusive Growth:** The narrowing rural-urban gap suggests positive trends in rural development, economic upliftment, and an improvement in living standards.

## CONCLUSION

- The latest HCES for 2022-23 does not only point to a continuing decline in the share of food items in the total spending basket of Indians. Equally revealing is a shift in the composition of food expenditure itself — from food grains and sugar to animal and horticulture products.

## DISINVESTMENT NOT A PANACEA FOR FISCAL DEFICIT

#LIBERALISATION #FISCALPOLICY

PRIMARY  
SOURCEThe Indian  
EXPRESSSECONDARY  
SOURCE

DIPAM.gov.in

*The government has not specified a target for disinvestment receipts in the Interim Budget for 2024-25. The step is reflective of a conscious effort of the Government to adopt a more holistic approach to disinvestment - one of proper and efficient management of public enterprises that rewards all shareholders.*

## WHAT IS DISINVESTMENT AND DIVESTMENT?

Disinvestment or divestment, is when the government sells its assets or a subsidiary, such as a Central or State public sector enterprise. Minority disinvestment, majority disinvestment, and complete privatisation are the three main approaches to disinvestment.

- On fruition of **minority disinvestment**, government retains a majority in the company, typically greater than 51%, thus ensuring management control. **E.g. Sale of 10% of government's share in Indian Renewable Energy Development Agency Limited (IREDA).**

- In case of **majority divestment**, government hands over control to the acquiring entity but retains some stake. **E.g. Neelachal Ispat Nigam Limited (NINL).**
- Whereas in **complete privatisation**, 100% control of the company is passed on to the buyer. **E.g. Sale of Air India to Tata Group.**
- **Nodal Ministry:** The Union Finance Ministry has a separate department for undertaking disinvestment-related procedures called the **Department of Investment and Public Asset Management (DIPAM).**

## OBJECTIVES

- The government may disinvest in order to **reduce the fiscal burden** or **bridge the revenue shortfall** for that year and to **retire government debt**.
- It also uses disinvestment proceeds to **finance the fiscal deficit**, to **invest in the economy and development** or **social sector programmes**.
- If successful, it also means that the government does **not have to fund the losses of a loss-making unit anymore**.
- Disinvestment also **encourages private ownership of assets** and trading in the open market.

## STRATEGIC PUBLIC SECTOR ENTERPRISE POLICY

- Under the new "Public Sector Enterprise" policy, various sectors will be classified as strategic and non-strategic sectors.
- The policy has identified 4 sectors as strategic sectors: i) Atomic energy, Space and Defence ii) Transport and Telecommunications iii) Power, Petroleum, Coal and other minerals iv) Banking, Insurance and financial services.
- **In strategic sectors, there will be bare minimum presence of the existing public sector commercial enterprises** at Holding Company level will be retained under Government control.
- The remaining CPSEs in the strategic sector will be privatised or merged with other CPSEs.
- **In non-strategic sectors, CPSEs will be privatised, otherwise shall be closed.**

In recent times, Central government has used the route of stake sale to exit loss-making ventures and increase non-tax revenues. Has this objective been met? Let's find out.

## TRENDS OF DISINVESTMENT IN RECENT YEARS

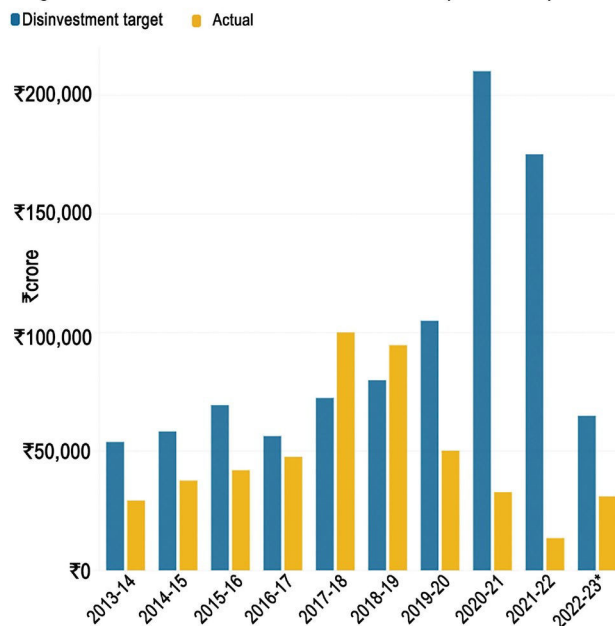
- **Out of the around ₹4.20 lakh crore raised in the last 10 years from disinvestments, ₹3.15 lakh crore was**

## ECONOMIC DEVELOPMENT

realised from minority stake sales and Rs 69,412 crore came from strategic transactions in 10 CPSEs— HPCL, REC, DCIL, HSCC, NPCC, NEEPCO, THDC, Kamarajar Port, Air India and NINL.

- To begin with, different central governments over the last three decades have been able to meet annual disinvestment targets only six times.
- Since 2014, the government has met (and overachieved) its disinvestment targets twice.
- In 2017-18, the government earned disinvestment receipts of a little over ₹1 lakh crore as against a target of ₹72,500 crore, and in 2018-19, it brought in ₹94,700 crore when the target was set at ₹80,000 crore.
- In current fiscal (2023-24), out of the budgeted amount of ₹51,000 crore, about 20% or ₹10,051 crore has been collected through minority stake sales via IPO (Initial Public Offering) and OFS (Offer for Sale). (January 2024)

Target disinvestment and actual disinvestments (2013-2023)



### ADVANTAGES OF DISINVESTMENT/DIVESTMENT

- **Investment in Enterprise:** Raises finances for the government that can be used for restructuring or capacity addition in the public sector enterprise.
- **Reduces the debt burden of the government** as a substantial portion of budgetary support was provided to keep these companies afloat.
- **Increase Social Sector Spending:** Contributes to the non-tax revenue of the government that can be used for social sector spendings.

- **Enhanced Competitiveness:** Enforces market discipline in the divested entity as they need to be more efficient and productive in order to survive based solely on their own financial and economic strength.
- **Professionalism in Management:** Management becomes more professional and profit-oriented. This reduces rent seeking behaviour among the staff.
- **Multiplier Effect on the Economy:** Unlocks the economic potential of the enterprise, resulting in better market valuation, higher profits and greater employment generation potential. Post-privatization, the performance of the privatised entity improves significantly in terms of net worth, net profit, return on assets (ROA), return on equity (ROE), gross revenue. This benefits the economy in the medium to long term.
- **Benefits to Consumers:** Private sector participation in key strategic sectors have resulted in better services to the customers at a reasonable price.

### CHALLENGES FACED BY THE GOVERNMENT

- **Policy flip-flop on Disinvestment** discourages private sector/potential bidders to plan acquisitions:
  - Strategic disinvestment decisions are being governed by political necessities.
  - With elections round the corner, the government is apprehensive of any movement on the strategic sale side.
  - Big-ticket privatisation plans like Bharat Petroleum Corporation Ltd (BPCL), Shipping Corporation of India (SCI) and CONCOR are already on the back burner.
- **Global Economic Shocks:** Worsening of financial capacity and risk-reward options of potential bidders during COVID-19 pandemic seriously affected transactions in 2020 and 2021, followed by the Ukraine conflict last year, which hurt minority stake sales as well as strategic sales.
- **Issues with Disposal of Non-Core Assets:** A non-core business asset can be any kind of non-essential asset with respect to generating revenue and the core business operations of the company. A non-core asset could be a factory or property that is no longer being used.
  - The procedures involved in the strategic sale of PSUs are long and complicated. Strategic disinvestment transactions have to deal with matters such as

## ECONOMIC DEVELOPMENT

resolving land title, lease and land use issues with State government authorities.

- Currently, as per policy, in case of strategic divestment the land assets of a PSU are supposed to be hived off to a special purpose vehicle (SPV).
- As per the guidelines, land cannot be given back to the states if it's freehold land owned by the PSU. And state governments need to give an NOC if they have given the land on lease to the PSU.
- For example, many PSUs including BEML have lands given on lease by multiple states from whom a No Objection Certificate (NOC) is mandatory for DIPAM to go ahead with the strategic sale.
- But some states are opposing the NOC saying they had acquired land for the PSU project, so once it is sold the land needs to be returned.
- Competition Challenges:** Disinvestment of many companies may further concentrate the monopolisation tendencies in a sector. This in the longer term may go against the public interest as private companies may increase the cost of goods and services for want of higher profits.
- Resistance by Employees:**
  - One of the challenges before the government about the strategic sale of Rashtriya Ispat Nigam Ltd (RINL) or Vizag Steel is **vehement opposition by employee unions**.
  - Multiple court cases filed by employees' unions and other interest groups against the disinvestment policy as well as specific transactions were also hindering deals.
- Challenges to Disinvestment Through Minority Stake Sale:**
  - The valuation of shares has been affected by the Government's decision not to reduce government holdings below 51%.
  - With the continuing majority ownership of the Government, the public enterprises would continue to operate with the earlier culture of inefficiency.
  - This is visible in terms of relatively muted perception of investors in these stocks as compared to private sector peers.
- Source of Non-Tax Revenues:** PSE's are key sources for dividends (non-tax revenue) and profits which form a key portion of budgetary deficit financing. Higher

dividend transfers in the past have successfully helped the government navigate stress in their finances and keep the fiscal deficit under check.

**WAY FORWARD**

Privatisation or disinvestment programmes should aim at maximisation of Government's equity stake value. The learning from the experience of Temasek Holdings Company in Singapore may be useful in this context.

- The Government can transfer its stake in the listed CPSEs to a separate corporate Entity.
- This entity would be managed by an independent board and would be mandated to divest the Government stake in these CPSEs over a period of time.
- This will lend professionalism and autonomy to the disinvestment program.

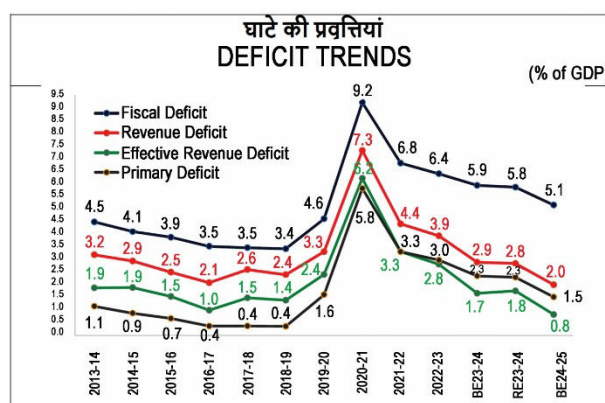
## EFFECTIVENESS OF FRBM ACT

#FISCALPOLICY #GOVERNMENTBUDGETING

PRIMARY SOURCE THE HINDU

*The Finance Secretary has questioned the continued relevance of rigid, statutory fiscal targets and has emphasised on a more nuanced and realistic approach to debt sustainability and fiscal responsibility.*

### HAS THE GOVERNMENT OF INDIA ADHERED TO STATUTORY FISCAL TARGETS?



- Despite several years since its enactment, **the Government of India has struggled to meet the FRBM Act targets**. The Act has undergone multiple amendments which pushed fiscal consolidation targets frequently.

## ECONOMIC DEVELOPMENT

- **Recently, the fiscal deficit shot up remarkably during the pandemic year to record levels** of 9.2% in FY 2020-21.
- However, the government announced an easing of the deficit to 6.7% of GDP in the Budget Speech of 2021-22.
- Since then, it has **continued on the path of fiscal consolidation**. Adhering to that path, the fiscal deficit in 2024-25 is estimated to be 5.1% of GDP, with an aim to reduce it further to below 4.5% by 2025-26.

In this context, let us discuss the legislation that imposes fiscal targets in India.

### FISCAL RESPONSIBILITY & BUDGET MANAGEMENT (FRBM) ACT, 2003

The Act wants to ensure long term macroeconomic stability through Prudential debt management and greater transparency in fiscal operations of the Central Government.

- **Fiscal Management Principles for Central Government:**
  - **Fiscal Deficit Based Target:** Central Government's limit fiscal deficit to be less than 3% of GDP.
  - **Debt based target:** Central government will ensure that:
    - General government debt does not exceed 60% of GDP by 2024-25. (General government debt refers to the collective debt of all states along with the Central Government).
    - Central Government debt does not exceed 40% of GDP by 2024-25.
  - **Limits on Guarantees:** Central government does not give additional guarantees to any loan of the Consolidated Fund of India in excess of 0.5% of GDP.
- **Escape Clause**
  - **Conditions during which fiscal deficit targets can be breached** i.e. fiscal deficit higher than targeted. In these situations, **fiscal deficit can exceed by 0.5% of GDP of the target** prescribed.
    - Grounds of national security
    - Act of war
    - National calamity
    - Collapse of agriculture severely affecting farm output and incomes.
    - Structural reforms in the economy with unanticipated fiscal implications

- Decline in real output growth of a quarter by at least three percent point below its average of previous four quarters.
- **Conditions when fiscal deficit can be reduced than targeted:** Increase in real output growth by at least 3% point above its average of the previous 4 quarters. In this situation, the fiscal deficit can be reduced by 0.5% over what is targeted.

### BENEFITS OF FRBM

- **Ensure Fiscal discipline:**
  - Limit on Expenditure through targets on Fiscal Deficit and Public Debt
  - Restricts Direct Monetisation of Government's deficit through RBI's borrowing
  - Higher Revenue mobilisation through rolling targets in form of Tax-to-GDP ratio
- **Ensure Transparency and Accountability:**
  - Submission of Reports by the Government to Parliament
  - Audit of compliance of FRBM Provisions by CAG
- **Ensure Intergenerational Equity** by preventing short-sighted expansionary fiscal policies and overaccumulation of debt
- **Ensure Macro-economic Stability and Promote Investments** as low levels of debt enhance investor confidence and this may lead to increase in both Foreign Institutional and Foreign Direct Investments.

### CHALLENGES FACED IN IMPLEMENTING FRBM

- **Problems with the Targets:**
  - Focuses only on Quantity and Quality of Fiscal Deficit
  - Does not target to eliminate Effective Revenue Deficit
  - Does not target to keep Capital Expenditure at a certain level
- **Lack of Flexibility:** Fiscal rules need to be cyclically adjusted rather than being fixed. For example, during a high growth phase, the Fiscal deficit should be reduced by much higher margin in comparison to normal times. Similarly, adherence to fixed Fiscal deficit targets during recession would prevent the Government from following counter-cyclical fiscal policy.
- **Lack of Well-Defined Escape Clause:** The FRBM Act has also been criticised because of **incorporating**



## ECONOMIC DEVELOPMENT

imprecisely defined fiscal deficit escape clauses such as collapse of agriculture, structural reforms etc.

- **Circumvention of Fiscal Deficit target Through Off Budget Financing**
- **Poor enforcement as the FRBM laws: No legal sanctions or penalties for breach of targets by the Centre.** For example, In the case of the states, Article 293 clause (3) of the Constitution requires them to seek central government permission to raise loans so long as they have outstanding liabilities to the central government.
- **Limited accountability in the Event of Missed targets:** Lack of independent fiscal institutions to monitor compliance.

#### NUANCED STRATEGY FOR DEBT SUSTAINABILITY AND FISCAL RESPONSIBILITY

- **Consolidating Debt Management Functions:** Establishing a debt management office would consolidate all debt management functions in a single agency and **bring in holistic management of the internal and external liabilities** as against the existing fragmented debt management jurisdiction under various institutions such as:
  - Reserve Bank of India – Domestic Marketable Debt i.e., dated securities, treasury bills and cash management bills.
  - Ministry of Finance (MOF); Office of Aid and accounts Division – external debt
  - Ministry of Finance; Budget Division and Reserve Bank of India – Other liabilities such as small savings, deposits, reserve funds etc.
- **Establishing an Independent Fiscal Council** to prepare multi-year fiscal forecasts for the central and

state governments, define a sustainable level of public debt and provide an independent assessment of the central govt's borrowing & fiscal performance.

- This will help **check competitive populism** and an institutional mechanism will **bring in transparency** by promoting the culture of proper disclosures & good accounting practices within the Government.
- Further, this body can also recommend changes in fiscal deficit and debt targets based on necessity.

#### CONCLUSION

- International experience suggests that a fiscal council improves the quality of debate on public finance, and that, in turn, helps build public opinion favourable to fiscal discipline. This instils confidence among domestic & foreign investors and improves policy outcomes.

## MICRO SMALL & MEDIUM ENTERPRISES (MSMES)

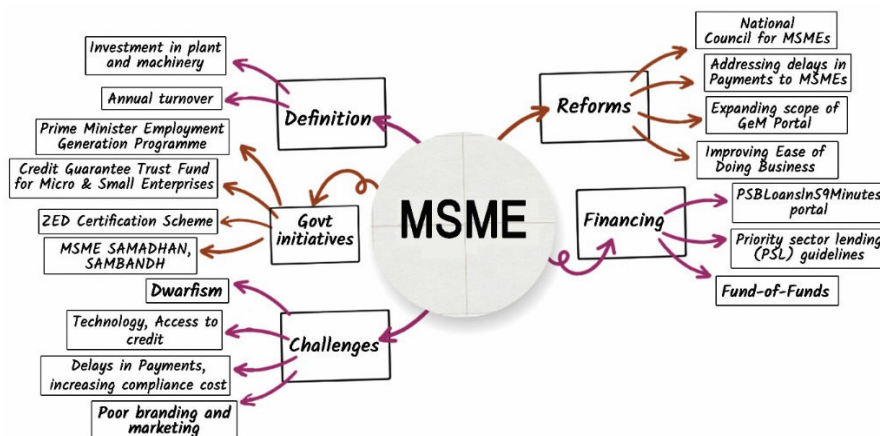
#INDUSTRY

PRIMARY SOURCE BusinessLine

The 2023 Union Budget revolved around the inclusive development of MSMEs by allocating a ₹10,000 crore fund in a bid to foster technological developments and infrastructural support.

#### ABOUT MSME SECTOR

- **Employment:** MSME sector employs around 111 million people and is the second largest employer after agriculture.
- **Contribution to Economy:** It contributes 30% of India's GDP and 45% of our manufacturing output and 48% of exports.

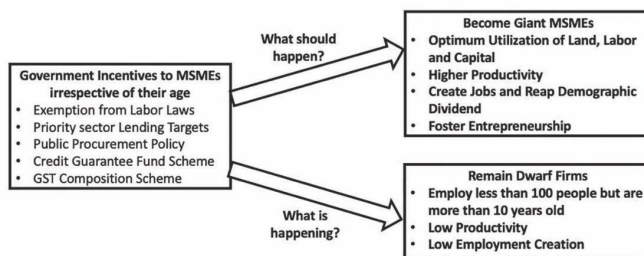




## ECONOMIC DEVELOPMENT

## ISSUES WITH MSMEs

- However, MSMEs continue to face challenges of **formalisation, access to technology, access to timely & adequate finance, improving competitiveness, availability of skilled manpower, access to latest technology & marketing.**
- The MSME sector is yet to benefit from advances in digitization, which can substantially reduce cost and time. The sector was also affected in the recent past due to structural changes in the economy such as implementation of GST and demonetisation.
- The Government provides a number of incentives so as to nurture **Infant MSMEs** to grow into **large sized giants** and ensure optimum **utilisation of factors of production, higher productivity and job creation.** However, the Government policies create perverse incentives for firms to remain small rather than grow bigger.



- The above-mentioned problem has led to dominance of dwarf MSMEs firms which are more than 10 years old but yet continue to employ less than 100 people.
- These firms account for more than **half of all firms in manufacturing by number, but their contribution to employment is only around 14%.** This clearly shows that these firms are reluctant to grow bigger due to the fear of losing out on the benefits enjoyed by MSMEs.
- The dominance of dwarf firms has led to a number of problems- **Stagnation in Share of Manufacturing Sector (17%), Problem of Missing Middle, lower employment elasticity, Informalization of jobs etc.**

## GOVERNMENT INITIATIVES FOR MSMEs

- **Prime Minister Employment Generation Programme (PMEGP):** Financial Support for setting up of new MSMEs; Maximum Cost of project: Rs 25 lakhs

- **ZED Certification Scheme:** Financial support for manufacturing products which have Zero Defect and Zero Effect on Environment.
- **Credit Guarantee Trust Fund for Micro & Small Enterprises (CGTSE):** Collateral free loan up to a limit of Rs 1 crore is available for individual MSE on payment of guarantee fee to bank by the MSE.
- **A Scheme for promoting Innovation, Rural Industry & Entrepreneurship (ASPIRE):** One-time grant of 100% of the project cost or Rs 1 crore (whichever is lower) for promotion of innovation and entrepreneurship
- **National Manufacturing Competitiveness Programme (NMCP):** Credit Linked Capital Subsidy for Technology Upgradation (CLCSS); Lean Manufacturing Competitiveness for MSMEs
- **MSME SAMADHAAN:** Portal to monitor the delays in the payments
- **MSME-SAMBANDH:** Portal to monitor public procurement policy
- **TReDS Platform:** Discounting invoices for MSMEs from corporate buyers through multiple financiers.

## NEW DEFINITION OF MSME

## REVISED MSME CLASSIFICATION

Composite Criteria: Investment and Annual Turnover			
Classification	Micro	Small	Medium
Manufacturing Enterprises	Investment < Rs 1 crore	Investment < Rs 10 crore	Investment < Rs 50 crore
Service Enterprises	And Turnover < Rs 5 crores	And Turnover < Rs 50 crores	And Turnover < Rs 250 crore

**Changes Made in New Definition:** Three important changes have been introduced in the new definition of MSMEs:

1. Investment limit has been increased.
2. An additional criterion of annual turnover has been introduced.
3. Distinction in definition of Manufacturing and Service sector enterprises has been done away with.

## U.K. SINHA COMMITTEE RECOMMENDATIONS FOR MSME

- **Institutional Framework:** For convergence of various MSME related policies, **National Council for MSMEs**

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**ECONOMIC DEVELOPMENT**

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should be set up at apex level under Chairmanship of Prime Minister. States should have a similar **State Council for MSMEs**, for better co-ordination of developmental initiatives. Further, Ministry of MSME may consider setting up of a **Non-Profit Special Purpose Vehicle (SPV)** to support crowd sourcing of investments by various agencies particularly for conducive business ecosystem for MSMEs.

- **Addressing delays in Payments to MSMEs** by setting up a monitoring authority under the Development Commissioner, MSME. Majority of States have only one **MSE Facilitation Council (MSEFC)** which is not adequate to cater to delayed payment cases arising in the entire State. Hence, there is a need to increase the number of Facilitation Councils particularly in larger States.
- **Expanding scope of GeM Portal:** Government should make it mandatory for PSUs/ Government Department to procure from MSEs up to the mandated target of 25% through the GeM portal only. Further, the portal can be developed as a full-fledged marketplace enabling MSE sellers to procure raw material as well.
- **Improving Ease of Doing Business:** Presently, MSMEs must do multiple registrations with various entities such as Udyog Aadhaar portal, GSTN, National State Insurance Corporation (NSIC) etc. These needs to be replaced by making PAN as a Unique Enterprise Identifier (UEI) and the same should be used for various purposes.
- **Capacity Building:** Proposal to establish **Enterprise Development Centres (EDCs) within District Industries Centres (DICs)** has to be expedited; Provide handholding support to entrepreneurs in various aspects such as technical know-how, managerial skill, filling up of knowledge gap, etc.
- **Focusing on MSME Clusters:** MSME clusters should collaborate with companies having innovation infrastructure, R&D institutions and universities that specialize in a specific industry or knowledge area.
- **Distressed Asset Fund:** Assist units in clusters where a change in external environment, e.g., a ban on plastics or 'dumping' has led several MSMEs becoming NPA.

**ACCESS TO FINANCE**

- **PSBLoansIn59Minutes portal** caters only to existing entrepreneurs having information required for in-

principle approval such as GSTIN, Income Tax returns, bank statement, etc; Portal should also cater to new entrepreneurs, who may not necessarily have such information, including those applying under PMMY loan and Stand-up India.

- **Priority sector lending (PSL)** guidelines apply uniformly to all lenders and mandate specific targets to banks to lend to priority sectors, i.e., agriculture, small and marginal farmers, micro enterprises, weaker sections, etc. At present, the overall target for universal banks is 40% and the target for small finance banks is 75%. The committee has recommended that for banks that wish to specialise in MSME lending, requirement to do agricultural lending under PSL can be waived provided they achieve 50% PSL lending target to MSMEs in case of Universal Banks and 80% in case of Small Finance Banks.
- RBI should **increase the limit for non-collateralised loans** to Rs 20 Lakh from the present limit of Rs 10 Lakh. This limit of Rs 20 lakh should also be applicable to the loans provided under the MUDRA scheme.
- **Loan Service Providers:** RBI should create a new category of Loan Service Providers (LSPs). LSPs would act as agents of borrowers (MSMEs) and offer individualised advice to them catering to all the aspects of finance.
- **Development service providers:** MSMEs lack expertise in product development, technology adoption and marketing strategy. Government should build networks of development service providers that can provide customised solutions to MSMEs in the area of technology, product development and marketing techniques; Need for strengthening of MSME Export Promotion Council.
- **Insurance:** Government should take active efforts to provide insurance coverage to MSME employees on the lines of PMSBY and PMJJBY schemes.
- **Fund-of-Funds:** Government sponsored Fund of Funds (FoF) to support VC/PE firms investing in the MSME sector.

**RECOMMENDATIONS OF ECONOMIC SURVEY 2018-19 FOR MSMEs**

In this regard, the Economic Survey 2018-19 has given the following recommendations:

- **Incentivizing 'infant' firms rather than 'small' firms:** Provision of incentives to firms irrespective of their age

## ECONOMIC DEVELOPMENT

has led to dwarf firms. Hence, incentives should be limited to initial 5-7 years only.

- **Re-orientation of PSL:** Under MSME's PSL targets, it is necessary to prioritise start-ups and infants.
- **Focus on High Employment elastic sectors** such as Textiles, leather etc.
- **Deregulating labour law restrictions** can create significantly more jobs, as seen by the recent labour reforms introduced in states such as Rajasthan.

**CONCLUSION**

MSMEs that grow not only create greater profits but also contribute to job creation and productivity in the economy. Hence, the Government policies must, therefore, focus on enabling MSMEs to grow by unshackling them.

## LESSER PENALTY PLUS REGIME NOTIFIED BY COMMISSION OF INDIA

#ECONOMY, REGULATORY BODIES



*Competition Commission of India (CCI) has implemented regulations for the 'Lesser penalty plus' mechanism to prevent cartelisation. The Lesser Penalty Plus mechanism is also popularly known as the 'leniency-plus regime'.*

**ABOUT LENIENCY PLUS REGULATION**

- Leniency Plus regime allows companies involved in cartelisation to **report other cartels and receive reduced penalties**.
- The CCI can **reduce penalties by up to 30%** for involvement in the first cartel **and up to 100%** for newly-disclosed cartels.
- The amount of penalty reduction will be **based on the evidence provided** by the applicant.

**WHAT IS A LENIENCY & LENIENCY PLUS REGIME?**

- The **current Competition Act 2002** already has a **leniency programme**, which allows companies that provide sufficient information about a cartel in which they have participated to receive partial immunity from penalty.

- Under the **existing leniency (lesser penalty rule) framework**, CCI may impose a lesser penalty on a person involved in a cartel if such person has made a full and true disclosure in respect of alleged violations and such disclosure is vital.
- Under '**Leniency Plus**', a carteliser who is cooperating with CCI for leniency, **can disclose the existence of another cartel in an unrelated market** in the course of original leniency proceedings in exchange for an additional reduction in penalty.
- Leniency Plus is a proactive antitrust enforcement strategy aimed at attracting leniency applications by **encouraging companies already under investigation for one cartel to report other cartels unknown to the competition regulator**.
- **Benefits:** This leniency plus regime is expected to further incentivize applicants to come forward with disclosures regarding multiple cartels, thereby enabling the CCI to save time and resources on cartel investigation.

**WHAT IS A CARTEL?**

- In India, **cartelisation is a civil offence** prohibited under the Competition Act, 2002.
- **Section 2(c) of the Competition Act, 2002 defines a cartel** as including an association of producers, sellers, distributors, traders or service providers who, by an agreement amongst themselves, limit control or attempt to control the production, distribution, sale or price of, or trade in, goods or provision of services.

**WHAT KIND OF ACTIVITIES ARE PROHIBITED?**

Section 3(3) of the Competition Act, 2002 is the specific substantive provision which prohibits anti-competitive agreements in India, including horizontal agreements (and cartels), between enterprises that:

- **Directly or indirectly determine purchase or sales prices;**
- **Limit or control** production, supply, markets, technical development, investment or the provision of services;
- **Allocate geographic markets or customers;** or
- **Directly or indirectly result in bid rigging or collusive bidding.** Such agreements are presumed to have an AAEC and are consequently void.

**WHY THE NEED TO PREVENT CARTELIZATION?**

Cartels inflict severe damage on the economy and consumers.

## ECONOMIC DEVELOPMENT

- Firstly, they **lead to inflated prices**, causing consumers to pay more for goods and services.
- Second, cartels **restrict innovation** and hinder technological advancement because they have little incentive to invest in research and development when they control the market.
- Third, they **deter new entrants from entering markets**, stifling competition and limiting consumer choice.

**CONCLUSION**

This harm to competition is why competition authorities are dedicated to dismantling cartels and preventing their formation.

## PAYMENT SECURITY MECHANISM TO BE INTRODUCED FOR E-BUSES

#INFRASTRUCTURE

PRIMARY  
SOURCE

pib

*The Finance Minister announced that the government will introduce a payment security mechanism for encouraging greater adoption of e-buses for public transport. In 2023, the Ministry of Housing and Urban Affairs had introduced the **PM eBus Sewa Scheme** to boost India's electric mobility infrastructure in urban areas by supporting deployment of 10,000 electric buses through PPP model.*

**ABOUT PM eBUS SEWA SCHEME**

- The scheme aims to increase the modal share of electric bus based public transport in India.
- It has two-components:
  1. **Segment A: Augmentation of City Bus Services and Associated Infrastructure:** Aims to augment city electric bus operations by extending Central Assistance for 10,000 electric bus operations on PPP model, bus depot and behind the meter power infrastructure.
  2. **Segment B: Green Urban Mobility Initiative (GUMI):** Aims to support implementation of GUMI projects for contemplating bus services and demonstrating reduction in GHG emissions in urban areas. It will include support for implementation of National Common Mobility Card (NCMC) based

Automatic Fare Collection System (AFCS), bus priority infrastructure etc.

- **Eligible Cities:** 169 cities are eligible to benefit under the scheme. The cities will be selected through a 'challenge method'. Maximum number of bus to be allocated to different category of cities and central assistance per kilometre will be by the following method:
- **Central Assistance for bus operations**

Classification of eligible cities by population	Number of e-bus allocated per city	Central Assistance per km
20-40 lakhs	150	
10-20 lakhs	100	
05-10 lakhs	100	
<05 lakhs	50	

**Note:** Large metropolitan cities with population more than 1 crore are not eligible under the scheme.

- Central Assistance of e-buses on PPP model in urban areas will be provided on per kilometre basis for 10 years or upto March 2037, whichever is earlier.
- CA will be provided for assured kilometres and if buses operate less than the assured km, CA will be released in proportion to rate applicable to under-utilised km. Operations beyond the assured kms will be borne by the city.
- All India aggregation of ebus operations will be done by Convergence Energy Services Limited (CESL) on Gross Cost Contract (GCC) - wet lease model.
- On furnishing Registered Vehicle Scrapping Facility (RVSF) Certificate for scrapping buses, equivalent number of buses may be considered for allotment.
- **Payment Security Mechanism (PSM):** According to the Scheme Guidelines, Payment Security Mechanism is part of the scheme. State Guarantee is to be provided for payment of bus operations and States/UTs will agree to PSM being developed by GoI. Payment Security will be provided to the Operator as per an agreement between

**NEED FOR PAYMENT SECURITY MECHANISM**

- A Payment Security Mechanism is a **funded capital reserve that provides interest free working capital to its beneficiary** projects in the case of a default event.

**ECONOMIC DEVELOPMENT**

- Currently, around 90 Public Transport Authorities (PTAs/STCs/SPVs) operate around 1.50 lakh buses in India.
- Around 27,000 buses operate in urban areas while the remaining 1.23 lakh buses serve intercity and district routes, catering to about 7 crore passengers daily.
- Cumulative losses of PTA stood at around Rs 1,22,300 attributed to low tariffs and high operational costs and low overall cost recovery for PTAs remaining around 74%.
- Thus, **to address concerns like delays in payments and weak financial conditions** of STUs/STCs, the Ministry of Heavy Industry has proposed to introduce a Payment Security Mechanism similar to SECI for solar power operators.
- USA has committed to contribute a \$150 million (Rs 1,231 crore) grant for payment security mechanism to PTAs. Rest is expected to be contributed by the Government for creation of Rs 3,453 crore payment security mechanism.

**BENEFITS OF PAYMENT SECURITY MECHANISM**

- Reduces the perception and quantum of risk of OEMs/operators.
- Assured payment and de-risking of payments to the operators/OEMs.
- Improves credit rating of operators/OEMS and enables them to borrow at lesser interest rates.
- Foster widespread adoption of e-buses in India.

**IMPORTANCE OF THE PM eBUS SEWA SCHEME**

- Contribute to decarbonization of the transport sector reducing to greenhouse gas emissions.
- Help India to achieve net-zero emissions by 2070.
- Mainstreaming of electric buses in the urban mass transport.
- Reduce the usage of diesel, which is the most common fuel used by buses thus protecting from pollution and imports of crude oil saving precious forex reserve.
- Promote domestic manufacturing of ebuses.

**ABOUT CONVERGENCE ENERGY SERVICES LIMITED (CESL)**

- CESL is a wholly owned subsidiary of Energy Efficiency Services Limited (EESL).
- It is investing in clean energy and clean transportation for delivering affordable and reliable energy at scale.

- CESL focuses on business models focusing on optimising assets, monetising and stacking multiple values and using innovative financial structures to deliver at scale.
- Core focus of CESL is on promoting electric mobility in India and increasing rural energy access.
- **Key Program of CESL:**
  - Gram Ujala Program
  - National E-Mobility Program
  - Electric Vehicle Public Charging Infrastructure
  - PM eBUS SEWA Scheme

**FDI IN SPACE SECTOR**

#EXTERNALSECTOR #ECONOMICGROWTH

**PRIMARY SOURCE** BusinessLine

*The Union Government has amended its foreign direct investment (FDI) policy for the space sector.*

**WHAT IS FOREIGN DIRECT INVESTMENT (FDI)?**

FDI is the investment through 'capital instruments' by a person resident outside India:

- In an unlisted Indian company; or
- In 10% or more of the equity capital of a listed Indian company

**ROUTES FOR FDI**

- **Automatic Route:** Under it, the non-resident investor or the Indian company **does not require any approval** from the Government of India for the investment.
- **Government Route:** Under it, prior to investment, approval from the Government of India is required. **Proposals** for FDI under Government route are **considered by the respective Administrative Ministry/ Department.**

**ABOUT THE POLICY CHANGE**

The Union Government has tweaked how much percentage of equity a foreign entity may acquire in **three different sub-sectors through the automatic route:**

- 49% in launch vehicle manufacture and spaceports
- 74% in satellite manufacture
- 100% in components and sub-systems for satellites and ground station hardware.



**ECONOMIC DEVELOPMENT**

These numbers are not FDI limits, but the percentages allowed through the 'automatic route' — **higher holding is possible with government approval.**

**Space Odyssey: Encouraging Investment**

## RESTRICTIONS ON PAYTM PAYMENTS BANK

#BANKING #PRELIMSNIPPETS

**PRIMARY  
SOURCE**Reserve Bank  
of India

The Reserve Bank of India (RBI) has imposed restrictions on Paytm Payments Bank and barred the entity from offering incremental banking services effective March 15th, 2024.

**WHY WERE RESTRICTIONS IMPOSED?**

- **Comprehensive System Audit report** and subsequent **compliance validation report** by the external auditors **revealed persistent non-compliance** and **continued material supervisory concerns** in the bank.
- Hence, RBI took this supervisory action under **Section 35A of Banking Regulation Act, 1949.**

**IMPLICATIONS**

- Paytm Payments Bank will **not be allowed to accept deposits or undertake credit transactions or top ups in any customer accounts, prepaid instruments, wallets, FASTags and NCMC (National Common Mobility Cards)** post March 15th, 2024.
- Further, the bank will also **not be able to provide BBPOU (Bharat BillPay Operating Units) and UPI facilities.**

**EXEMPTIONS**

- **Interest, cashbacks or refunds may be credited** anytime.
- **Withdrawal or utilisation of balances by customers** from their savings and current bank accounts, prepaid instruments, FASTags and NCMC **are permitted without any restrictions and up to the available balance.**

**WHAT ARE PAYMENT BANKS?**

CRITERIA	PAYMENT BANKS
Registration and Licensing	Registered under Companies Act, 2013 <b>Licensed under Banking Regulation Act, 1949</b>
Eligibility	Prepaid Payment Instrument (PPI) Providers, Resident individuals; NBFCs; Telecom Companies, supermarket chains, public sector entities etc.
Min. Capital Requirements	Rs 100 crores
FDI allowed?	Yes. Up to 74%
Accept Deposits	Only Demand Deposits. <b>No Fixed Deposits and NRI Deposits</b>
Restrictions on Deposits	Up to Rs 2 Lakhs
Deposit Insurance Available?	Yes
Can Lend Loans	<b>No</b>
Issue Debit/ Credit Card	They <b>can issue debit cards but not credit cards</b> unless under a co-branded or co-lending arrangement with a partner bank or NBFC.
Set up based upon recommendations of	Nachiket Mor Committee

SLR and CRR applicable	CRR Applicable; <b>SLR: 75% of Deposits.</b>
<b>BASEL Norms applicable</b>	<b>Yes. 15% of RWAs</b>
<b>PSL Norms applicable</b>	<b>No. Can't lend Loans</b>
Examples	Airtel, India Posts Payment Bank, Paytm, FINO etc.

## RBI STREAMLINES PROCESS OF ONBOARDING AEPS SERVICE PROVIDERS

#PAYMENTSYSTEMS #PRELIMSNIPPETS

PRIMARY SOURCE: Reserve Bank of India

Amid increasing instances of fraud related to Aadhaar-enabled payment system (AePS), Reserve Bank of India (RBI) has proposed to streamline the process of onboarding AePS service providers. RBI is also planning to introduce additional fraud risk management measures for AePS.

### WHAT IS AADHAR-ENABLED PAYMENT SYSTEM (AePS)?

- AePS, or Aadhaar enabled Payment System, is a payment system that enables customers to **carry out financial transactions through Aadhaar-based authentication at Point of Sale (PoS) devices and micro ATMs.**
- Aadhaar is a unique identification number containing demographic and biometric data issued to Indian residents.
- **National Payments Corporation of India (NPCI) introduced AePS system** to promote financial inclusion and make banking services accessible to all, particularly those living in remote and rural areas.
- Maximum limit of **Rs. 10,000 on a single transaction.** But, the overall limit is set by respective banks.
- Monthly transaction limit of Rs 50,000 on a 30 day rolling basis.

### BANKING SERVICES OFFERED BY AePS

- Cash Deposit
- Cash Withdrawal

- Balance Enquiry
- Mini Statement
- Aadhaar to Aadhaar Fund Transfer
- Authentication
- BHIM Aadhaar Pay

## NATIONAL CREDIT GUARANTEE TRUSTEE COMPANY (NCGTC)

#BANKING #PRELIMSNIPPETS

PRIMARY SOURCE

THE HINDU BUSINESS LINE

SECONDARY SOURCE

NCGTC.in

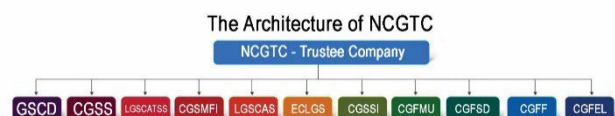
The National Credit Guarantee Trustee Company (NCGTC) has initiated a forensic audit at Bandhan Bank over allegations of evergreening of loans and fictitious loan accounts.

### WHAT ARE EVERGREENING OF LOANS?

- It means throwing new loans to help a stressed or delinquent borrower repay old loans.

### ABOUT NATIONAL CREDIT GUARANTEE TRUSTEE COMPANY (NCGTC)

- Incorporated under the Companies Act, 1956.
- Established by the Department of Financial Services, Ministry of Finance, as a wholly owned company of the Government of India.
- **Functions of NCGTC:**
  - Acts as a common trustee company for multiple credit guarantee funds.
  - Credit guarantee programmes are **designed to share the lending risk of the lenders** and in turn, **facilitate access to finance for the prospective borrowers.**
  - The common architecture of NCGTC has been designed to handle multiple guarantee programmes under a single umbrella organisation as part of a larger financial inclusion programme of the government.



Presently, **there are eleven dedicated credit guarantee Trusts under the Management of NCGTC:**

## ECONOMIC DEVELOPMENT

- Credit Guarantee Fund Scheme for Educational Loans (CGFEL)
- Credit Guarantee Fund Scheme for Skill Development (CGFSD)
- Credit Guarantee Fund Scheme for Factoring (CGFF)
- **Credit Guarantee Fund for Micro Units (CGFMU)**
- Credit Guarantee Fund for Stand Up India (CGFSI)
- **Emergency Credit Line Guarantee Scheme (ECLGS)**
- Credit Guarantee Scheme for MFIs (CGSMFI)
- Loan Guarantee Scheme for COVID Affected Sectors (LGSCAS)
- Loan Guarantee Scheme for COVID Affected Tourism Service Sector (LGSCATSS)
- Credit Guarantee Scheme for Startups (CGSS)
- Guarantee Scheme for Corporate Debt (GSCD).

Cumulatively, these Trusts have a committed credit guarantee corpus of ₹ 87,513 crore as on December 31, 2022.

**CREDIT GUARANTEE FUND FOR MICRO UNITS (CGFMU)**

- To enable collateral free micro loans up to Rs.10 lakh and overdraft facility up to Rs.10,000 under Pradhan Mantri MUDRA Yojana and collateral free loans above Rs.10 lakh and up to Rs.20 lakh to Self Help Groups with the overall objective of financial inclusion.
- **Who can lend:** Banks/ NBFCs/ MFIs/ Other Financial Intermediaries conforming to certain eligibility criteria.
- **Who can borrow:** New or existing micro unit / enterprise falling under any sector covered under Pradhan Mantri Mudra Yojana (PMMY) or as defined in the MSMED Act, 2006 and Self Help Groups (SHGs).

**EMERGENCY CREDIT LINE GUARANTEE SCHEME (ECLGS)**

- To enable 100% guaranteed collateral free loans to eligible businesses (including MSMEs) with a view to enable them to tide over the temporary liquidity crunch faced by them due to partial/complete lockdowns and other restrictions in the wake of Covid-19.
- **Guarantee coverage:** 100% of the amount in default.

**RECESSION**

#NATIONALINCOME #PRELIMSNIPPETS

PRIMARY  
SOURCE BusinessLine

UK and Japan have slipped into recession

**WHAT IS A RECESSION?**

- A recession is defined as **at least two consecutive quarters of negative economic growth** as measured by a country's real GDP.
- It is a period of **significant decline in total output, income and employment**, usually lasting from 6 months to 18 months and **marked by widespread contractions in many sectors** of the economy.
- A severe and protracted recession is called **depression**.

**HAS IT EVER OCCURRED IN INDIA?**

- India has faced economic recession in 2020-21 for the first time in the last 41 years since 1979-80.
- In independent India's history, **five such years of negative GDP growth were registered**. They saw contraction of -1.2% (FY58), -3.66% (FY66), -0.32% (FY73), -5.2% (FY80) and (2020-21).

**OTHER RELATED TERMS**

- **Double-dip Recession:** A double-dip recession is when a recession is followed by a short-lived recovery and another recession.
- **Stagnation:** It is a prolonged period of little or no growth in an economy often highlighted by periods of high unemployment.

## PRADHAN MANTRI MATSYA KISAN SAMRIDHI SAH-YOJANA

#AGRICULTURE #PRELIMSNIPPETS

PRIMARY  
SOURCE THE HINDUSECONDARY  
SOURCE pib

*The Union Cabinet has approved the Pradhan Mantri Matsya Kisan Samridhi Sah-Yojana, a sub scheme under the Pradhan Mantri Matsya Sampada Yojana (PMMSY), for the micro and small enterprises operating in the fisheries sector.*

**WHY THE NEED FOR THIS SCHEME?**

Despite significant achievements, there are a number of sectoral challenges felt in the fisheries sector.

- Informal nature of the sector
- Lack of crop risk mitigation
- Lack of work based identities
- Poor access to institutional credit

**ECONOMIC DEVELOPMENT**

- Sub-optimal safety & quality of fish sold by micro & small enterprises.

**EXPENDITURE INVOLVED**

- It will be **implemented as a Central Sector Sub-scheme** under the Central Sector Component of the PMMSY.
- It has an **estimated outlay of Rs.6,000 crore** consisting of 50% public finance (including the World Bank and the AFD external financing), and rest 50% being the anticipated investment from the beneficiaries/private sector leverage.
- It will be **implemented for 4 years** from FY 2023-24 to FY 2026-27 **across all the States and UTs.**

**MAJOR COMPONENTS & STATED IMPACT**

- To create a **National Fisheries Digital Platform (NFDP)** to **provide 40 lakh small and micro-enterprises work based identities.**
- **Gradual formalisation of the fisheries sector** and enhanced access to institutional credit to micro-enterprises and fisheries cooperatives.
- **Gradual shift from conventional subsidies to performance based incentives** in fisheries.
- Supporting targeted MSEs to focus on **improving value chain efficiency and quality control.**
- **Enhance export competitiveness** through value addition, realisation and creation.
- **Create 1.7 lakh new jobs**, with a **special emphasis on employing 75,000 women** and also aims to generate 5.4 lakh continued employment opportunities in the MSEs value chain.

**INTENDED BENEFICIARIES**

- **Fishers, Fish (Aquaculture) Farmers**, Fish workers, Fish Vendors or such other persons directly engaged in fisheries value chain.
- **Micro and Small enterprises.**
- FFPOs also include **Farmers Producer Organizations (FPOs).**
- Any other beneficiaries that may be included by the Department of Fisheries, GoI as targeted beneficiaries.

**NATURAL RUBBER**

#AGRICULTURE #PRELIMSNIPPETS

PRIMARY  
SOURCE BusinessLine

*The union government has increased the allocation **sustainable and inclusive development of the natural rubber sector scheme** for the next two financial years (2024-26) by 23 per cent from Rs 576.41 crore to Rs 708.69 crore.*

**ABOUT NATURAL RUBBER**

- It is a polymer of isoprene, an organic compound and obtained from the latex of several tropical trees.
- Para Rubber tree (*Hevea brasiliensis*) is the most important tropical tree, native to the Amazon River basin, and the **first commercial Hevea plantations** were established at Thattekad in Kerala in 1902.
- **Agro-Climatic conditions:**
  - **Soil:** Well-drained and well-weathered, such as lateritic, alluvial, and sedimentary types.
  - **Rainfall:** At least 100 rainy days a year.
  - **Temperature:** Range of about 20 to 34°C.
  - **Humidity:** Around 80%, with 2000 hours of sunshine
  - **Wind:** Absence of strong winds.
- Natural rubber is preferred over synthetic rubber due to its high tensile strength, vibration dampening properties, and tear resistance.
- India is the **third largest producer, fourth largest consumer** of natural rubber in the world.
- Major rubber producing states include: **Kerala, Tamil Nadu, Tripura, Assam.**

**ABOUT SUSTAINABLE AND INCLUSIVE DEVELOPMENT OF NATURAL RUBBER SECTOR**

- **Nodal Ministry:** Ministry of Commerce and Industry
- **Implementing Agency:** Rubber Board
- **Objective:** To enhance natural rubber production and productivity.
- **Features of the scheme:** To increase the production and productivity through expanding planted area, accelerating rubber plantation development programmes in **non-traditional regions including the North-East**, intensifying research to evolve appropriate technologies for rubber cultivation, processing and end product manufacturing and transferring technology through training and extension services.
  - Under the scheme, **Rubber Board provides subsidies for new planting and replanting** (of senile plantations) to growers.

## ECONOMIC DEVELOPMENT

- **Major components of the scheme are:** (1) Rubber Plantation Development & Extension; (2) Rubber Research Support for processing & marketing; (3) infrastructure development and specialised services and (4) Human Resources' Development
- The Board also provides quality planting material, promotes Rubber producers Societies (RPS), sets up Group Processing Centres, provides training for tapping of rubber trees and processing of field latex, provides assistance for rain guarding to increase number of tapping days and provides assistance for prevention of diseases in rubber plantations.

### ABOUT THE RUBBER BOARD

- The Rubber Board is a **statutory body** constituted by the Government of India, **under the Rubber Act 1947**, for the overall development of the rubber industry in the country.
- **Nodal Ministry:** The Rubber Board functions under the **Ministry of Commerce & Industry** of the Government of India.
- **Head Office:** Kottayam, Kerala
- **Composition:** As per Section 4(3) of the Rubber Act of 1947, The Board shall consist of:
  - **A Chairman to be appointed by the Central Government;**
  - **Two members to represent the State of Tamil Nadu**, one of whom shall be a person representing the rubber producing interests;
  - **Eight members to represent the State of Kerala**, six of whom shall be persons representing the rubber producing interests, three of such six being persons representing the small growers;
  - **Ten members to be nominated by the Central Government**, of whom two shall represent the manufacturers and four labour; Three members to be nominated by the Central Government, of whom two shall be from the Department of Commerce and one from the Department of Agriculture and Cooperation;
  - **Three members of Parliament**, of whom two shall be elected by the House of People (Lok Sabha) and one by the Council of States (Rajya Sabha);
  - **The Executive Director**, ex-officio; and
  - **The Rubber Production Commissioner**, ex-officio.

- **Functions:** The functions of the Board as defined under the Rubber Act of 1947 are:
  - To promote by such measures as it thinks fit the **development of the rubber** industry by undertaking, assisting or encouraging scientific, technological or economic research; improving the marketing of rubber; collection of statistics from owners of estates, dealers and manufacturers etc.
  - It shall also be the duty of the Board to **advise the Central Government on all matters relating to the development of the rubber industry**, including the import and export of rubber.

## REGULATION S

#FINANCIALMARKETS #PRELIMSNIPPETS

PRIMARY SOURCE THE HINDU

HDFC Bank has raised \$750 mn through Regulation S Bonds.

### ABOUT REGULATION S BONDS

- Regulation S is a regulation of the Securities and Exchange Commission (SEC) of the United States of America. It provides that **offers and sales of securities that occur outside of the United States are exempt from the registration requirements of Section 5 of the Securities Act of 1933** (the "Securities Act").
- **Section 5 of the Securities Act requires that all securities offered or sold** by means of interstate commerce **be registered** unless an exemption is available.
- The purpose behind Section 5 is to **ensure adequate disclosure before a security is offered to the public** so that the public may make informed investment decisions
- Regulation S permits these types of transactions to occur without SEC registration.
- **Benefits:** It allows issuers and other distributors of securities to raise capital more quickly, more discreetly and less expensively than would be the case if registration were required. This encourages foreign investors to buy US financial assets in order to **increase the liquidity of US markets**.
- **Risks:** Abuse of Regulation S means that **securities are being offered or sold without adequate disclosure to the public**.



# NATIONAL AGRICULTURE MARKET (E-NAM)

#AGRICULTURE #PRELIMSNIPPETS

PRIMARY  
SOURCE THE HINDU

*The inter-mandi trade on e-NAM (National Agriculture Market) witnessed more than two times growth during the first nine months of 2023-24.*

## e-NAM OVERVIEW

- National Agriculture Market (eNAM) is a pan-India electronic trading portal which **networks the existing APMC mandis to create a unified national market** for agricultural commodities.
- **Operated by:** Ministry of Agriculture & Farmers' Welfare, Govt. of India has appointed the **Small Farmers' Agribusiness Consortium (SFAC) as the Lead Implementing Agency of e-NAM**. SFAC will operate and maintain the e-NAM platform with the help of a Strategic Partner, presently NFCL.

## WHAT IS THE DIFFERENCE BETWEEN E-NAM AND THE EXISTING MANDI SYSTEM?

- e-NAM is **not a parallel marketing structure** but rather a device to create a national network of physical mandis which can be accessed online.
- It seeks to **leverage the physical infrastructure of the mandis** through an online trading portal, enabling buyers situated even outside the Mandi/ State to participate in trading at the local level.

## HOW WILL E-NAM OPERATE?

- It **offers a "plug-in" to any market yard existing in a State** (whether regulated or private).
- The special software developed for e-NAM is available to each mandi which agrees to join the national network free of cost with necessary customization to conform to the regulations of each State Mandi Act.

## SUBSTITUTE OR SUPPLEMENT OF MANDIS?

- It **increases the choice of the farmer** when he brings his produce to the mandi for sale.
- Local traders can bid for the produce, as also traders on the electronic platform sitting in other States/ Mandi.
- The farmer may choose to accept either the local offer or the online offer.
- In either case **the transaction will be on the books of the local mandi** and they will continue to earn the market fee.
- In fact, the **volume of business will significantly increase** as there will be **greater competition** for specific produce, resulting in higher market fees for the mandi.

## SIGNIFICANCE

- Integration of APMCs across the country through a common online market platform will **facilitate pan-India trade in agriculture commodities, provide better price discovery through transparent auction process** based on quality of produce along with **timely online payment**.

# PRACTICE QUESTIONS

## MCQS

**Q1. With reference to Payment Banks, consider the following statements:**

1. Mobile telephone companies and supermarket chains that are owned and controlled by residents are eligible to be promoters of Payment Banks.
2. Payment Banks can issue both credit cards and debit cards.
3. Payment Banks cannot undertake lending activities.

How many of the statements given above is/are correct?

- |               |              |
|---------------|--------------|
| (a) Only one  | (b) Only two |
| (c) All three | (d) None     |

**Q2. Consider the following statements:**

1. Well-drained and well-weathered soil are required for the cultivation of natural rubber.
2. India is the largest producer of natural rubber.

**ECONOMIC DEVELOPMENT**

3. Natural rubber is covered under the Minimum Support Price scheme.

How many of the statements given above is/are correct?

- (a) Only one (b) Only two  
(c) All three (d) None

**Q3. With reference to 'Regulation S', consider the following statements:**

1. They are instruments permitting foreign investors to invest in India's securities markets without getting registered with the SEBI.
2. The regulation encourages foreign investors to buy financial instruments and increases liquidity of financial markets.

Which of the above statements is/are correct?

- (a) 1 only (b) 2 only  
(c) Both 1 and 2 (d) Neither 1 nor 2

**Q4. Which one of the following best describes the concept of 'evergreening of loans'**

- (a) Providing loans to promote the penetration of renewable energy.  
(b) All bank loans extended to the Micro, Small and Medium Enterprises.  
(c) Throwing new loans to help a stressed or delinquent borrower repay old loans.  
(d) Waiver of agricultural loans by the banking system.

**Q5. Consider the following statements:**

1. Recession refers to a negative nominal GDP growth rate for two consecutive quarters in a year.
2. India has never faced an economic recession after 1991 reforms.

Which of the above statements is/are correct?

- (a) 1 only (b) 2 only  
(c) Both 1 and 2 (d) Neither 1 nor 2

**DESCRIPTIVE QUESTIONS**

- Q1.** Examine the developments in disinvestments of key government enterprises. What are the challenges faced by the authorities in this regard?
- Q2.** What are the reasons for introduction of Fiscal responsibility and Budget Management (FRBM) act, 2003? Discuss critically its salient features and their effectiveness.

**Answers:** 1-b, 2-a, 3-b, 4-c, 5-d

# CONSTITUTION, POLITY AND GOVERNANCE

# GS PAPER (PRELIMS) & GS PAPER II (MAIN)

## ISSUES WITH HORIZONTAL DEVOLUTION BY FINANCE COMMISSION

#FEDERALISM

PRIMARY  
SOURCE

THE HINDU

SECONDARY  
SOURCE

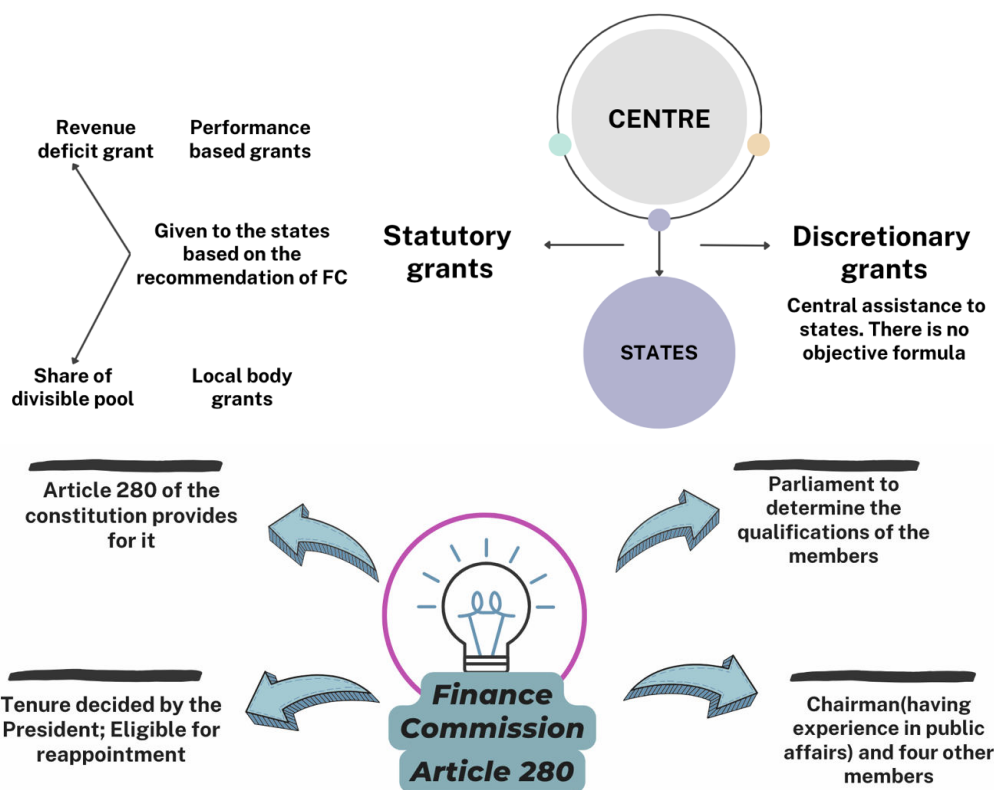
fincomindia.nic.in

*As States begin their annual budget-making exercise, they are increasingly faced with a daunting task in managing their finances. With the spending on social welfare schemes taking precedence ahead of the elections and States' own tax and non-tax revenues growing at a sluggish pace, attention*

*inevitably turns to their share in the divisible pool of union taxes, grants, and loans from the Centre.*

### FINANCIAL RELATIONS BETWEEN UNION AND STATES

- Articles 268 to Article 293 in Part XII of the Indian constitution deal with Centre-state financial relations.
- Article 268: Taxes levied by Centre but collected and appropriated by States. Ex: stamp duties
- 101st Constitution amendment provides for GST taxation law, establishing GST Council under Article 279A of the Indian Constitution.
- Grants-in-aid to states: **Statutory grant under Article 275** and **discretionary grant under article 282** of Indian Constitution.



## CONSTITUTION, POLITY AND GOVERNANCE

### FISCAL FEDERAL ISSUES

- Issues with Finance commission's revenue sharing model:

The share of states in the central taxes for the 2021-26 period is recommended to be 41%. The criteria for horizontal devolution is:

CRITERIA	WEIGHTAGE
Income Distance	45%

Area	15%
Population (2011)	15%
<b>Demographic Performance</b>	<b>12.5%</b>
Forest and Ecology	10%
<b>Tax and fiscal efforts</b>	<b>2.5%</b>

### How weights changed in the devolution formula

Component	11 <sup>th</sup> FC (2000-05)	12 <sup>th</sup> FC (2005-10)	13 <sup>th</sup> FC (2010-15)	14 <sup>th</sup> FC (2015-20)	15 <sup>th</sup> FC (2021-25)
Population (1971)	10.0	25.0	25.0	17.5	-
Population (2011)	-	-	-	<b>10.0</b>	<b>15.0</b>
Area	<b>7.5</b>	<b>10.0</b>	<b>10.0</b>	15.0	15.0
Forest and ecology	-	-	-	<b>7.5</b>	<b>10.0</b>
Index of infrastructure	<b>7.5</b>	-	-	-	-
Income distance	<b>62.5</b>	50.0	-	50	<b>45.0</b>
Tax and fiscal efforts	<b>5.0</b>	7.5	-	-	<b>2.5</b>
Fiscal capacity distance	-	-	<b>47.5</b>	-	-
Fiscal discipline	<b>7.5</b>	7.5	17.5	-	-
Demographic performance	-	-	-	-	<b>12.5</b>

\*FC: Finance Commissions

- Weightage of population and area combined has increased since 2005:** Weight for population in the devolution formula was just 10% under the 11th Finance Commission (2000-05) which increased to 15% under the 15th Finance Commission based on 2011 census. The **weight given to the area** has also doubled from 7.5% under the 11th Finance Commission to 15 per cent under the 14th Finance Commission. These tilts the scales in favour of States with large area and large population. Southern states have opposed this move as they argue that they are being penalised for controlling their fertility rates.
- Income Distance:** Income distance is calculated by deducting the GSDP per capita of a state from the GSDP

per capita of the state which scores the highest on this metric. It has the **highest weightage** under the horizontal devolution formula, based on the principle of federalism which requires the wealthier states to share their excess revenue with not so wealthier states for overall development of the nation. This has benefitted the north Indian states disproportionately.

- Demographic performance:** This criterion was introduced by 15th Finance Commission to cater to the demands of the South Indian states who have performed well to control population explosion in their states. However, the formula for calculating the weight for demographic performance inverses the TFR and multiplies it by the population in 1971. This results in

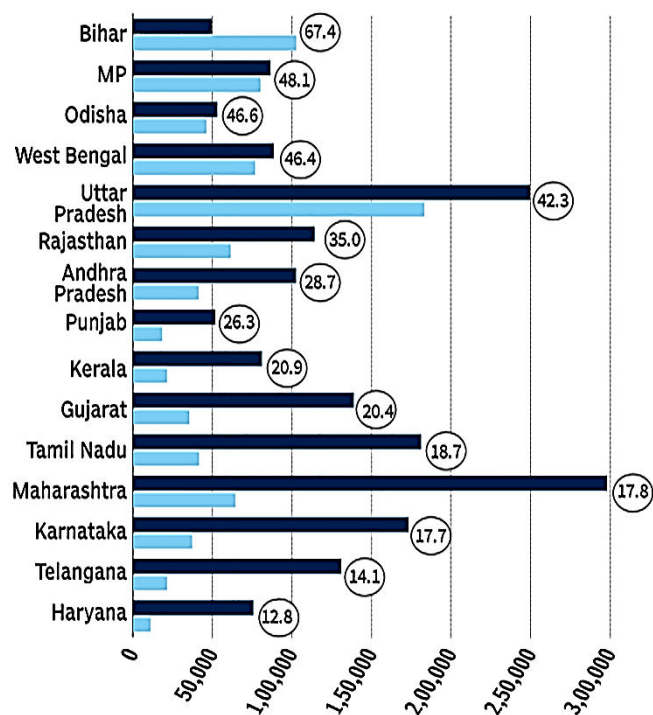
## CONSTITUTION, POLITY AND GOVERNANCE

higher weight once again going to more populous states.

- **Tax and Fiscal efforts:** Fifteenth Finance Commission has introduced 2.5 per cent weight for States which improve their tax and fiscal performance. But the weight for fiscal discipline was much higher at 17.5 per cent under the Thirteenth Finance Commission.
- **Disproportionate devolution:** Budget estimates for FY24 suggest that Bihar is set to receive a massive ₹1.02-lakh crore as the Centre's Tax share. This amounts to 67.4% of the State's total tax revenue. UP's share is equally humungous at ₹1.83-lakh crore, which is 42% of the total tax revenue. On the other hand, in case of Haryana, the share of Union taxes was just ₹11,164 crore (13% of the total tax revenue). In all southern states, the share from the centre's divisible pool formed less than 30% of their total tax revenue. **While Bihar received ₹7.26 and UP got back ₹2.49 for every rupee that went into the Centre's pool, Maharashtra, Haryana and Karnataka received 8 paise, 14 paise and 17 paise respectively.**

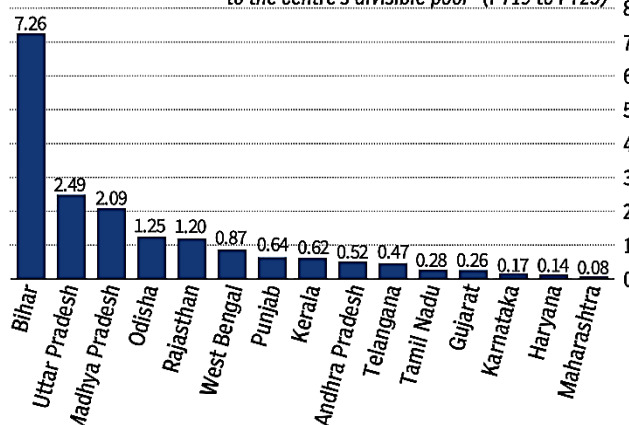
### Distribution from divisible pool is more significant for some States

For 2023-24 (BE) (in ₹ cr)      ○ % of centre's devolution  
■ Own tax revenue    ■ Share of union taxes    in total tax revenue



### For every rupee that goes into the pool, some states get a lot more than others

Money that they get back for every rupee given  
to the centre's divisible pool\* (FY19 to FY23)



- **Shrinking devolution:** Though the Finance Commission enhanced states' share in the divisible pool of taxes, it didn't result in concomitant increase in the actual devolution. This is because, over the last few years, **Central government has reduced the tax rates and increased the cess and surcharges which are not mandated to be shared with the states.** Cess and surcharges are part of central taxes but not part of the divisible tax pool and do not have to be shared with States. **Ex: Share of cess and surcharge as a percentage of Gross Tax revenue of Center has increased sharply from 2.3% in 1980-81 to 15% in 2019-20.**
- **Ceiling on the states' borrowing:** Union Budget has kept 3.5% of GSDP as their borrowing limit for FY24 and it restricted borrowing power of the states. (As per Article 293, states cannot raise loans without the consent of the Union if there is any outstanding loan made by the state government with a guarantee given by the centre.)
- **Loss of taxation rights under GST mechanism:** with the advent of GST, the states lost their rights to increase tax revenues by changing the tax rates on sale of many goods and services. (GST rates and slabs are decided by GST council with 3/4th majority vote).
- **Restrictions on off-budget borrowings:** Union Government had notified in FY22 that such off-budget borrowings would be considered as borrowings made by the state. This has reduced the capacity of states to increase their borrowings without violating fiscal deficit targets.



## CONSTITUTION, POLITY AND GOVERNANCE

### WAY FORWARD

- Giving taxation autonomy to states with sound fiscal performance or states which are more disaster prone like Kerala.
- Including states in deciding the terms of consideration of Finance Commission.
- Weightage of demographic performance can be raised to 15 to 20 per cent.
- Weightage given to 'income distance' must be reduced, as that may help southern states with a higher per capita income.
- Rationalizing the share of cess and surcharges in the gross tax revenue of centre.

## MAHARASHTRA ASSEMBLY PASSES BILL FOR PROVIDING 10% RESERVATION FOR MARATHA COMMUNITY

RESERVATIONS, SOCIAL JUSTICE

PRIMARY  
SOURCE THE HINDU

*Maharashtra Assembly has passed a legislation offering 10% reservations for the Maratha Community. This is the third time that Maharashtra Assembly has passed a legislation offering reservations for Maratha Community. The earlier two attempts were, however, not successful and was overturned by the Supreme Court. This attempt to give reservations for the Maratha community was done following the state-wide agitation by Maratha leader **Jarange Patil**, who demanded that if reservations was not provided to Marathas, he would go on to fast-unto-death.*

### RESERVATION IN INDIA

- **Article 15(4)** and **Article 15(5)** provide for reservation to **Socially and Educationally Backward classes** and SC/STs in admission to educational institutions.
- **Article 15(6)** provides for reservation to economically weaker sections of society in admission to educational institutions, added through **103rd constitutional amendment**.

- **Article 16(4)** provides for reservation to backward classes and SC/STs in public employment.
- **Article 16(6)** provides for reservation to economically weaker sections in public employment.
- **Article 335** provides for enabling provision of reservation for Scheduled Castes and Scheduled Tribes to services and posts under the union and the state. However, the efficiency of administration should be maintained.
- The **77th amendment** in 1995 provided for reservation in promotion of any services under the state for SC/STs.

### JUDICIAL TAKE ON RESERVATION

- V.P. Singh government in 1990, declared reservations of 27% government jobs for the OBCs. In the **Mandal case or Indra Sawhney case**, the Supreme Court upheld the OBC reservation, but imposed certain conditions like ceiling limit of 50% on reservation quota, no reservation in promotion, etc. The court accepted that the Caste continues to be marker for identifying socially and educational backwardness.
- Similarly, in **Janhit Abhiyan Case**, Supreme Court upheld the EWS reservation granted through the 103rd constitutional amendment.

### MARATHA RESERVATION ISSUE

- **1997: First major Maratha agitation for reservation** in government jobs and educational institutions was organised by the Maratha Mahasangh and the Maratha Seva Sangh.
- **2014: Maharashtra government brought 16% reservation for Marathas in government jobs and education.** However, the High court put a stay on it and this stay was subsequently upheld by the Supreme Court.
- **2017:** The Maharashtra government then set up **Gaikwad Commission** to study the social, financial and educational status of Maratha community. Based on commission's recommendation, **Socially and Educationally Backward Class Act, 2018** was enacted to provide 16% reservation to Marathas in education and government jobs.

## CONSTITUTION, POLITY AND GOVERNANCE

- **2021: Supreme Court holds Maratha Reservation unconstitutional** and strikes down the law. The court opined that the government failed to provide sufficient data to justify exceeding the 50% quota ceiling. But the Supreme Court allowed the State Government to collect empirical data for showing the backwardness of the community.
  - Exceeds the 50% ceiling limit imposed on reservations by Indra Sawhney judgement.
  - Gaekwad Commission report lacks reliable, scientific and adequate data to justify the backwardness of Marathas.
  - The Act created a special class of reservation for Marathas outside the OBC class and violates Article 14, 16 and 19 of the Constitution by bestowing them with special benefits.
  - The Act was passed without complying with procedural requirements mandated by 102<sup>nd</sup> Constitution (Amendment) Act, 2018.
- **2023:** The State government set up **Justice Shukre panel** to conduct large scale survey of the community.
- **Panel's report-**
  - **Marathas accounted for 28% of the population of the State**, of which **84% of them are backward**. So, such a large scale of backward community needs to be provided with separate reservation bracket.
  - It gave reasons like **decline in agricultural income, partitions in land holdings, extreme poverty as reasons for Maratha's backwardness**.
  - **94% of farmers who died by suicide** in the state **belonged to Maratha community**.
  - Inadequate representation of the community in all the sectors of public service, which has kept them excluded from the mainstream.
- Reservations in Maharashtra will overshoot the 50% limit, hence compromise the principle of superiority of merit.
- Discriminates other communities by giving Marathas a special privilege.
- Reinforces the grip of caste-based politics and mobilisation.
- Against the constitutional structure of providing reservations for SCs, STs, OBC and EBC.
- Demand for reservations among agrarian communities is due to following reasons:
  - Low income in agricultural households
  - Feeling of relative deprivation
  - Feeling of losing of dominance in rural areas as communities lower in social hierarchy such as SCs have gained economically and politically from the reservations.
  - Low participation in modern economy sectors like IT, Finance, Banking etc.

Thus, the government should be focusing on modernizing agriculture, education and opportunities for these communities.

**Conclusion:** So, this time the State government has backed up its Maratha reservation law with broader set of empirical data. But it is now for the Judiciary to decide whether the law stands the test of Constitutionality.

## RBI REPORT ON PANCHAYAT FINANCES

#PANCHAYATS FINANCING

**PRIMARY SOURCE** Reserve Bank of India

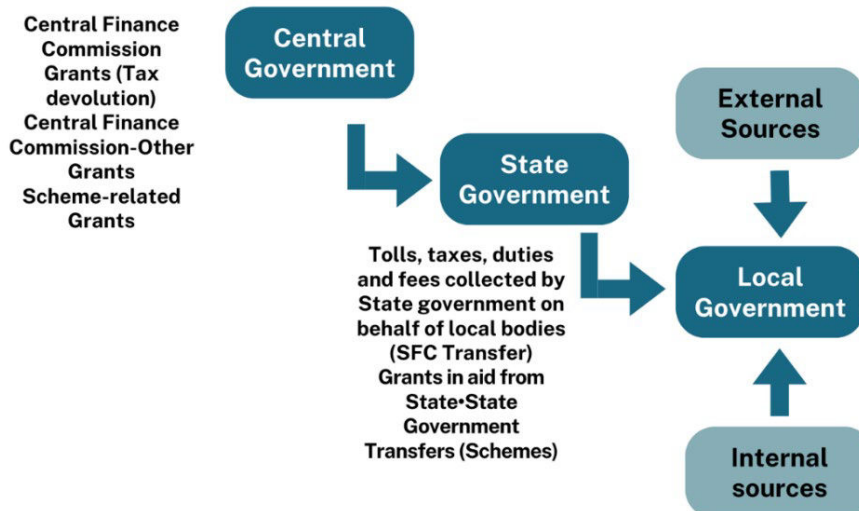
Recently, RBI released a report titled '**Finances of Panchayati Raj Institutions**' which is based on the data of 2.58 lakh Panchayats for the years 2020-21 to 2022-23, covering about 75% of rural local bodies. The report presents an assessment of panchayat finances and their role in India's socio-economic development.

### ISSUES WITH MARATHA RESERVATION

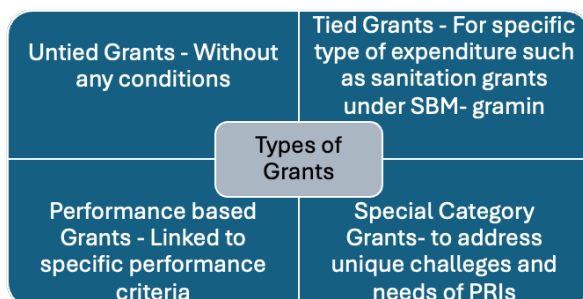
- Providing community specific reservations will flare similar demands in other provinces.

## CONSTITUTION, POLITY AND GOVERNANCE

### FISCAL SOURCE OF PANCHAYATS



### TYPES OF GRANTS RECEIVED BY PANCHAYATS



B. Own Non-Tax Revenue	1,365	1,415	1,494
C. Grants-in-aid	39,675	35,770	33,123
(i) Grants from Central Government	30,264	27,060	24,699
(ii) Grants from State Government	9,138	8,412	8,148

### FISCAL ISSUES AND CHALLENGES IN PANCHAYAT FINANCES

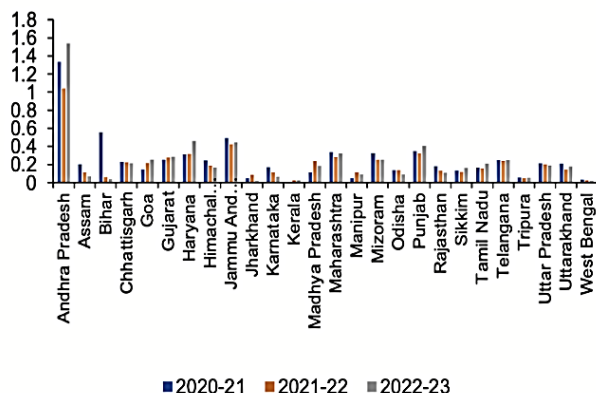
- **Limited own source of revenue:** Panchayat's own sources of revenues are limited, mainly property taxes, fees and fines. This restricts the financial autonomy of Panchayati Raj institutions and restricts their spending ability.
- **Heavy dependence on grants-in-aid:** Grants from higher level of governments such as Finance Commission and State Finance accounts for a total of **95%** of the revenue receipts of the panchayats. **Note:** Grants from the Central Finance Commission has consistently increased for panchayats since the 73<sup>rd</sup> Constitution Amendment Act.

Revenue Receipts			
			(₹ crore)
	2020-21	2021-22	2022-23
<b>Revenue Receipts</b>	41,744	37,971	35,354
A. Own Tax Revenue	703	786	737

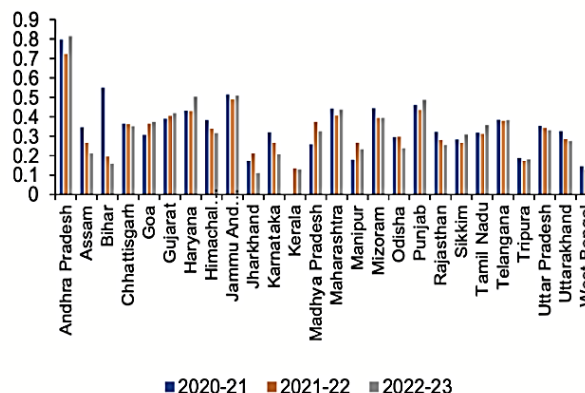
- **Issues with State Finance Commission:**
  - This over-dependence on vertical transfers is not predictable as states **continuously delay the constitution of State Finance Commission**. Ministry of Panchayati Raj has highlighted that only 9 states have constituted their SFC by 2022 whereas the scheduled timing in 2019-20.
  - State governments have even not adhered to its recommendation regarding devolution of financial aspect to panchayats.
- **Performance gap in both tax and non-tax revenues:** tax portion of revenue just 1.1% of total revenue whereas non-tax is 3.3%.
- **Lack of fiscal prudence:** the ratio of revenue to capital expenditure averaged 3.2 in 2022-23 and the ratio varied between 0.1 in Bihar and 11.5 in Tripura. Investment in capital projects was 29.6% of the total expenditure of Panchayats in 2022-23.
- **Distribution disparity:** There are notable differences in the distribution of grants-in-aid to PRIs across states and years.

## CONSTITUTION, POLITY AND GOVERNANCE

**Chart II.3.1a: State-wise Inequality in Grants in Aid: Theil's Index**



**Chart II.3.1b: State-wise Inequality in Grants in Aid: Gini Coefficient**



**Note:** Thiel's Index and Gini Coefficient are estimated based on State-wise *Panchayat*-level data. Both the Gini coefficient and Thiel index measure inequality. The Gini coefficient focuses on the overall distribution and is based on the Lorenz curve, while the Thiel index considers overall and subgroup inequality using the concept of entropy. The Gini coefficient varies between 0 and 1, with 0 corresponding to no disparity, i.e., each *Panchayat* receives equal grants-in-aid, and 1 corresponding to perfect inequality, i.e., only one *Panchayat* would receive all the grants-in-aid. The Thiel's index measures the difference between the weight of a *Panchayat* in the population of the State and the weight of its grants-in-aid in the total grants-in-aid by the State. An index of 0 indicates absolute equality, while an index of 1 indicates complete inequality.

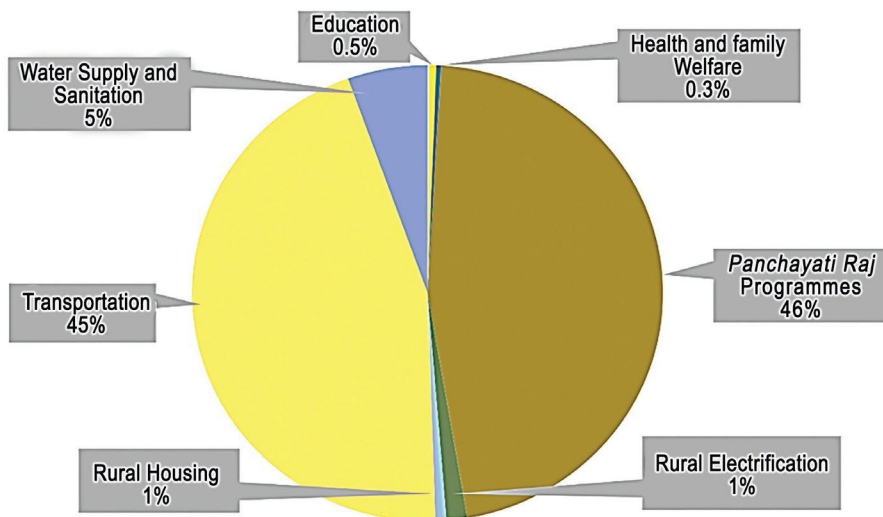
**Source:** RBI staff estimates.

- Various other challenges like inhibition of *Panchayat* leaders in imposing and collecting taxes, lack of

devolution of taxation powers by state government, etc. also exist.

### COMPOSITION OF CAPITAL EXPENDITURE BY PANCHAYATS

#### Composition of capital expenditure by panchayats:



### WAY FORWARD

- Intensification of efforts by panchayats to augment their own tax and non-tax revenue. **Ex: Velpur Gram Panchayat** in the Nizamabad district in Telangana effectively generated revenue from internal sources.
- Timely establishment of **SFCs** and prudent adherence to its recommendations.

- Operational changes** in PRIs like transparent budgeting, fiscal discipline, e-governance, robust monitoring and evaluation process, reporting of finances in standardized formats (**e-gram swaraj portal**), etc.
- Empowerment of **local leaders and officials**, active involvement of the **local community** to prioritise development needs, etc.

# PRIVILEGE COMMITTEES OF LOK SABHA & RAJYA SABHA

#PARLIAMENTARY COMMITTEES, PARLIAMENT

PRIMARY  
SOURCE THE HINDU

SC stays Lok Sabha privileges panel proceedings on West Bengal BJP MP's 'injury complaint'.

## PARLIAMENTARY PRIVILEGES

- Each House of Parliament and its Committees collectively and members of each House individually enjoy certain rights, privileges and immunities without

which they cannot perform their functions efficiently and effectively.

- The object of parliamentary privilege is to safeguard the freedom, the authority and the dignity of Parliament.
- They are enjoyed by individual members, because the House cannot perform its functions without unimpeded use of the services of its members and by each House collectively for the protection of its members and the vindication of its own authority and dignity.
- The Constitution has also extended the parliamentary privileges to those persons who are entitled to speak and take part in the proceedings of the house i.e. attorney general of India and Union Ministers.

Collective Privileges	Individual privileges
Enjoyed by each house of the parliament collectively	Enjoyed by the members of each house individually
Right to publish its reports, debates and proceedings	MPs cannot be arrested during the session of Parliament and 40 days before the beginning and 40 days after the end of a session.
Exclude strangers from its proceeding for secret sittings	Freedom of speech in parliament (article 105) and freedom of speech in state assembly (article 194).
Make rules to regulate its own procedure and conduct of business	Exempted from jury service, can refuse to give evidence, and appear as a witness in a case pending in a court when parliament is in session.
Punish members as well as outsiders for breach of its privileges or its contempt	
Right to receive immediate information of the arrest, detention, conviction, imprisonment, and release of a member	
Institute inquiries and order the attendance of witnesses	
Courts are prohibited to inquire into the proceedings of a house or its committees	
No legal process can be served within the precincts of the House without the permission of the presiding officer	

## COMMITTEE OF PRIVILEGES

- Examines the cases of breach of privileges of the house and its members and recommend appropriate action.
- Members: 15 members in Lok Sabha and 10 members in Rajya Sabha** respectively.
- The **speaker refers the issue of disqualification** under the anti-defection rules to this committee for enquiry.
- can **summon relevant individuals** for examination and study pertinent documents.



## CONSTITUTION, POLITY AND GOVERNANCE

- After reviewing the incidents or cases brought before it, the Parliament Privileges Committee **makes recommendations** "as it may deem fit".
- The privilege committee of the Rajya Sabha is chaired by the Deputy Chairperson but in Lok Sabha, there is no such rule.

## FUTURE OF ELECTION FUNDING IN INDIA AFTER THE ABOLITION OF ELECTORAL BOND SCHEME

#POLITICAL FUNDING #DEMOCRACY

PRIMARY SOURCE SUPREME COURT JUDGEMENTS

*Supreme Court has struck down the Electoral Bond scheme as being unconstitutional. This has again raised debates about the model of Electoral funding in India.*

### ELECTORAL FUNDING IN INDIA

- **Representation of Peoples Act, 1951** regulates the election financing landscape in India.
- **Section 77 of the RPA, 1951** and **Conduct of Election Rules, 1961** provides for limit on electoral expenditure for contesting candidates.
- Section 10A of RPA, 1951 provides for the disqualification of candidates for a period of three years for the failure to lodge accounts of election expenses.
- Section 29B of RPA, 1951 provides for political funding of parties and there is no limit on funds to be received.  
**Note:** It bans foreign funding of political parties in India.
- Section 29C of RPA, 1951 regulates the disclosure of donations received by political parties and prepare an annual report on it, which is to be submitted to Election Commission of India.
- Section 182 of Companies Act, 2013 provides for the corporate donations to political parties.

### NEED FOR ELECTORAL FUNDING REFORMS IN INDIA

- Supreme Court in **Kanwar Lal Gupta case** highlighted that financial superiority translates into electoral advantage.
- Money power in elections has raised the issue of violation of equality and equal footing between the rich and poor candidates.

- **Issue of Black money, bribery, and quid pro quo corruption** through electoral funding by private business entities. This was highlighted by Supreme Court in **Ashok Shankarrao Chavan case** (2014).
- Capture of government by private individuals and groups in a quid pro quo mechanism.
- At the same time, the election funding scheme should respect the privacy of donors as there is a possibility of targeting of donors by other parties.

### LEGAL LOOPHOLES

- Expenditure on star campaigners is shown in disproportionately in financial reports of parties to hide the real areas of expenditure.
- Scope of section 77(1) of RPA, 1951 is very narrow. It only applies on election expenditures of a candidate from the date of nomination to the date of declaration of results.
- There is no limit on election expenditure by a political party.
- New modes of VOTE for NOTE being devised such as the "Thirumangalam Formula" of Tamil Nadu.

### ALTERNATIVE MODELS FOR ELECTION FUNDING

#### A. Electoral Trust scheme:

- In the Electoral Bond Judgement, SC suggested Electoral Trusts as a better model to be followed which balanced the need for transparency of electoral funding and the confidentiality and anonymity of donors.
- Any company registered under Section 25 of Companies Act, 1956, can form an Electoral Trust.
- Under Section 17CA of the Income-tax Act, 1961, any citizen of India, a company registered in India, or a firm or Hindu Undivided Family or association of persons living in India, can donate to an electoral trust.
- The electoral trusts have to apply for renewal every three financial years.
- They must donate 95% of contributions received in a financial year to political parties registered under Representation of the People Act, 1951.
- The contributors' PAN (in case of a resident) or passport number (in case of an NRI) is required at the time of making contributions.
- Transparency under Electoral Trust Scheme:
  - Electoral trusts are mandated by law to maintain a list of contributions and submit to the Election

## CONSTITUTION, POLITY AND GOVERNANCE

Commission of India. Such records must also be submitted to income tax commissioner along with an audit report.

- Electoral Trusts receive donations from various donors and donate to various political parties. This makes it difficult to determine to whom an individual donor may have contributed.
- During the period 2017-18 — the financial year in which Electoral Bonds were first made available — to 2021-22, the money donated through Electoral Bonds was more than five times the amount that came through the Electoral Trusts.

### B. Recommendations of 255th Law Commission Report:

- Scope of section 77(1) of RPA, 1951 should be enlarged to cover the period spanning date of notification of election to the date of declaration of results.
- Limits on election related expenditure of political parties should be imposed.
- The decision regarding funding of political parties should be taken in the Annual General Meeting and not in the meeting of Board of Directors as done presently.

**C. State Funding of Elections** recommended by Dinesh Goswami and Indrajit Gupta Committee.

**Conclusion:** Before finalizing the future models of electoral funding to be adopted, adequate consultation with all stakeholders should take place with the aim to boost transparency and address issues of black money in the election funding.

## PERFORMANCE OF PARLIAMENT DURING THE 17<sup>TH</sup> LOK SABHA

#PARLIAMENT

PRIMARY  
SOURCE PRS

*As the term of 17<sup>th</sup> Lok Sabha is coming to an end, there has been a growing concern over the declining productivity of Lok Sabha in recent times.*

### PARLIAMENT OF INDIA

- Parliament as the legislative organ of the Union Government, occupies a pre-eminent and central position in Indian democracy.

- The Parliament of India consists of three parts- The President, the Council of States (Rajya Sabha) and the House of People (Lok Sabha).
- **Article 79 to 122** of Indian Constitution deals with the Parliament, its composition, powers, and other related aspects.

### FUNCTIONS OF PARLIAMENT

- **Representative Democracy:** Enables representation of various section of society, voice their concerns and participate in decision making.
- **Responsible Government:**
  - Ensures collective responsibility of the Council of Ministers to the Lok Sabha and by extension to the people of India.
  - Enables citizens to keep elected executives in control.
  - Offers various tools for parliamentarians to extract accountability from government. For ex. Zero Hour, Question Hour, Motions and Resolutions etc.
- **Consociational democracy:** Allows differing and fragmented sections of political opinion to come together into stable coalitions over issues.
- **Deliberative democracy:** Highest forum for deliberation over national issues.
- **Law making functions:**
  - Only institution which can carry out Amendments to the Constitution.
  - Exclusive power to enact laws under the Union List & Concurrent List of 7<sup>th</sup> Schedule of the Constitution.
  - Parliament is also empowered to enact laws under State List under special circumstances.
  - Parliamentary Committees allow members scrutinize functioning of government, its finances and scrutinize legislations effectively.
- **Financial Powers:** Union Budget is placed before the Parliament for its approval.
- **Judicial Powers:** Impeachment of President and removal of judges of SC and HC.
- **Electoral Powers:** Election of the President and Vice-President.

### CHALLENGES IN THE FUNCTIONING OF PARLIAMENT:

(DEBATE, DIALOGUE, DISSENT)

## CONSTITUTION, POLITY AND GOVERNANCE

- **Average number of sittings has come down** from 103 (1952) to 56 (2022) – lowest number of sittings in 17<sup>th</sup> Lok Sabha.
- **Time lost** has gone up from 5% (1985) to around 30% now.
- **Lack of debates** -103rdCAA (EWS)passed without any debate; Criminal reform bills was passed when more than 70% of opposition MPs were suspended.
- **Drastic reduction on time spent on budget discussion**- time spent on discussing union budget, demand for grants and finance bill has declined from 120 hours annually before 1990 to 35 hours post-1990.
- **No private member bill** has been passed since 1970 (Total only 14).
- **Weak committee system**- In 17<sup>th</sup> Lok Sabha, only 16% of the bills were sent to parliamentary committee for scrutiny.
- **Lack of women representation**- 14.4% (South Asia including Pakistan >12%, Global around 14%).
- **Disruption (Obstructionism)** added on to the three D's- the annual average of bills passed declined from 65 in 1952-90 period to 48 in 1991-2023.
- **Corruption and criminalization**- 43% Lok Sabha MPs have criminal records.
- Political parties must **ensure attendance** of at least 50% of their legislators throughout the proceedings of the Houses by **adopting a roster system**.
- Review whip system which hinders **the freedom of expression** of the legislators.
- Review of the Anti-Defection to rectify the areas like incentivizing legislators to resort to actions that invite expulsion from the party besides providing for time-bound disposal of defection cases by the Presiding Officer.
- Measures for effective functioning of **Department Related Standing Committees** like longer tenure (instead of the present one year), promoting specialization, etc.
- **Legislative Impact Assessment**: A detailed framework for pre and post Legislative Impact Assessment was needed.
- Need for **moving away from identity-based voting to that of development-oriented** exercise of voting preferences.
- Need for **responsive governments** positively acting on the concerns of the opposition and the need for **responsible and constructive opposition** while resorting to available parliamentary instruments.
- Building consensus on the proposal to allow unrestricted governance.
- Enacting for **reservation of women in legislatures. It has been done through 106<sup>th</sup> constitutional amendment**.
- Need for timely and effective action against legislators for non-ethical conduct.
- **Regular publication of reports** by the Secretariats of Legislatures on the attendance of Members and their participation in debates.
- **Addressing** the concern of a rising number of **legislators with criminal records**.
- Setting up of **special courts** for time-bound adjudication of criminal complaints against legislators.
- A **minimum number of sittings** for both the Houses of Parliament and State Legislatures per year need to be appropriately prescribed.

### UNDERLAYING CAUSES OF ABOVE CHALLENGES

- Lack of inner party democracy and the stringent Anti-Defection law ensures that MPs have to appease party 'High Command'.
- Increasing misuse of money power in politics.
- Mainstreaming of 'othering' and 'majoritarian' politics
- Lack of recorded voting reduces accountability
- Speaker-party affiliation manifests in partisan behaviour.
- Lack of calendar gives full discretion to the government.
- Lack of reforms in rules of Lok Sabha and Rajya Sabha.
- Decline of consensual nature and idealism in politics as displayed after the freedom struggle.

### REFORMS

#### 1. 15-point formula for parliamentary reforms by former vice-president of India:

- new **political consciousness** amongst legislators to review their roles and responsibilities.

#### 2. Ethical

- Code of Conduct for MP's (Nolan Committee)
- Strengthening of Ethics committee

## CONSTITUTION, POLITY AND GOVERNANCE

- Penalty for unruly behaviour.

### 3. Logistical

- Proper training
- Minimum number of days
- Rajya Sabha - 100 days
- Lok Sabha - 120 Days
- Linking salaries to the performance
- Political Parties:
- Pre-poll coalition (2nd ARC)
- Midterm realignment must seek fresh mandate
- Constructive vote of No confidence

## TAMIL NADU GOVERNOR REFUSES TO DELIVER CUSTOMARY ADDRESS

#FEDERALISM

PRIMARY  
SOURCE

The Indian  
EXPRESS

SECONDARY  
SOURCE

THE HINDU

*Governor of Tamil Nadu refused to deliver the customary address of Governor in the Legislative Assembly of Madras.*

### CONSTITUTIONAL PROVISION REGARDING CUSTOMARY ADDRESS

- The origin of the practice of customary address can be traced to the Government of India Act, 1919.
- **Article 87:** President shall address both houses of the Parliament assembled together at the commencement of the first session after each general election to the House of People and at the commencement of the first session of each year.
- Provisions regarding the address shall be made by the respective houses i.e. Lok Sabha and Rajya Sabha respectively.
- **Article 176:** Governor shall address the state legislative assembly and in case of state legislative council, both the houses together.
- Provisions regarding the address shall be made by the respective houses.

### GROWING CONFLICT IN READING OUT THE CUSTOMARY ADDRESS

- Kerala Governor Arif Mohammad Khan modified the portions of the text of customary address on his

discretion. Meanwhile, this has been the case in many non -BJP ruled states like West Bengal and Tamil Nadu.

- **Article 163** - There shall be a Council of Ministers with the Chief Minister at the head to aid and advise the Governor in the exercise of his functions, except in so far as he is by or under this Constitution required to exercise his functions or any of them in his discretion.
- If any question arises whether any matter is or is not a matter required to act in his discretion, the decision of the Governor in his discretion shall be final, and the validity of anything done by the Governor shall not be called in question on the ground that he ought or ought not to have acted in his discretion.
- But, **Governor has used the above discretion provision in exercising discretion in delivering customary address.**
- **Important Cases related to Customary Address**
- In **Yogendra Singh Handa vs State of Rajasthan (1967)**, Rajasthan High Court held that some portion read by governor was good enough to deem the whole address as read (**Context: Then Rajasthan governor did not read the full address**).
- In the Abdul Ghafoor Habibullah case, Kolkata high court held that governor cannot decline to deliver his address and refuse to fulfil his constitutional duty.

## UTTARAKHAND'S UCC

#SECULARISM

PRIMARY  
SOURCE

The Indian  
EXPRESS

SECONDARY  
SOURCE

THE HINDU

*Uttarakhand is set to become the first state in India to enact and implement the Uniform Civil code.*

### CONSTITUTIONAL PROVISION

- **Article 44** of the Indian constitution embodies the Indian State to provide for uniform civil code for its citizens.
- Also, the state of Uttarakhand has enacted the UCC under the legislative powers of **concurrent list** having subjects of marriage, adoption and succession.

### SALIENT FEATURES OF UCC OF UTTARAKHAND

- The law encompasses common provisions for marriage, divorce, inheritance, live-in-relationship, etc. for citizens of all communities. **NOTE:** *the schedule tribes have been excluded from the provisions applicability.*
- **Marriage and Divorce**

## CONSTITUTION, POLITY AND GOVERNANCE

- **Common age** of marriage for all communities
- Bigamy and polygamy have been banned.
- provides for **right to remarry following a divorce**. So, it indirectly bans certain marriage practices like Iddat and Nikah Halala. Forceful adherence to these activities has been criminalised.
- It also provides for **gender equality** in matters of divorce.
- In case of divorce or domestic dispute, the **custody of a child** up to 5 years of age will remain with the mother.
- **Inheritance and Succession**
  - majorly influenced by **Indian Succession Act, 1925**
  - It now allows the **Muslim communities to transfer any amount of property** according to their will and not just one-third as currently followed under their religious texts.
  - No difference between ancestral property and self-acquired property for intestate succession for Hindus.

### Note:

- It defines a list of class of heirs to the property and its inheritance.

Class-1 heirs	Class-2 heirs	others
Children, widow, parents, etc.	Siblings, nieces, nephews, grandparents, etc.	anyone most closely related to the deceased person

- The law also **elevates both mother and father as class-1 heir** in case of intestate succession, which till now included only the mother.
- The law also sets **equal property rights** for sons and daughters across all classes.
- It also contains provision for **disqualification from inheritance** in cases of murder or remarriage before the death of the person.

**Note:** disease or deformity of a heir is not a ground for disqualification.

**Note:** adopted children, illegitimate children, children born through surrogacy and children born through assisted reproductive technology are also considered to be biological children.

- **Live-in relationship:**
  - It **defines** the live-in relationship explicitly.
  - It makes the **registration** of live-in relationship mandatory, failing which can lead to a jail term of up to three months.
  - The **termination** of relationship also requires the couple to notify to the authority, failure of which can be penalized.
  - It also provides the woman with **right to claim maintenance** when deserted by their partner.
  - This provision is applicable to all those living in Uttarakhand as well as residents of Uttarakhand living elsewhere in India.

### ISSUES AND CHALLENGES WITH UTTARAKHAND'S UCC

- **Not comprehensive:** the legal code excludes the tribals from its ambit of application. Also, the live-in relationship provision recognizes only the heterosexual relationship, thus violating the judicial order in **Navtej Singh Johar case**.
- **Lack of synergy:** the UCC keeps the minimum age of marriage for women at 18 years only. But, the Prohibition of Child Marriage (Amendment) Bill, 2021 at Union level seeks to raise the age of marriage for women to 21.
- **Violates fundamental rights:** a section of critique see it as impinging upon the right to freedom of religion of Muslim communities.
- **Invasion of individual autonomy and privacy:** the mandatory registration of live-in relationship and provision for informing the parents in case either partner is less than 21 years of age seem to be violating Supreme Court's judgement on freedom to choose life partner (**Joseph Shine Case**).
- **Removal of distinction between separate and coparcenary joint family property:** It may so happen that now the entire property gets willed away to sons.
- **Class 1 heir now includes intestate's father:** Now, the mother would get half of what she would have got under Hindu Succession Amendment Act, 2005.
- **Inappropriate criteria of disqualification:** A widow or widower of any predeceased relative of an intestate loses the right to inherit if s/he remarries.
- **For a Christian Women,** who would have received half the intestate's property will get less under the UCC since, the property will be shared equally with children.



## CONSTITUTION, POLITY AND GOVERNANCE

- **Lack of 'uniformity':** If every state were to enact their separate UCCs then there will be 28 different UCCs which contradicts the claim of uniformity.

**CONCLUSION:** In this regard, it will be important to see the wider implications of this new UCC. Going forward, this code can serve as a learning benchmark for future laws in this aspect, most importantly being the national level UCC which has been seen imminent by Supreme Court in **Shah Bano Case**.

## CAPITAL PUNISHMENT

#CRIMINAL JUSTICE SYSTEM

PRIMARY SOURCE

THE HINDU

SECONDARY SOURCE

The Indian EXPRESS

Supreme Court is hearing a petition challenging the constitutionality of death by hanging as a mode of execution. The court clarified that the constitutionality of the death penalty is not in question, but rather the mode of execution. The government argues that the method of execution is a matter of legislative policy, and in 2018, the Centre supported death by hanging and did not find the method of execution "barbaric, inhuman, and cruel" compared to other methods such as lethal injection.

### NEED FOR REMOVAL OF CAPITAL PUNISHMENT (LAW COMMISSION 262<sup>ND</sup> REPORT ON DEATH PENALTY)

- **Does not Serve as Deterrence:** Death penalty is no more a deterrent than life imprisonment, which in India can be for the whole life with limited remissions granted after 30-60 years in many cases of serious crimes.
- **Retribution versus Vengeance:** Retribution is important in punishment but not synonymous with vengeance. The "eye for an eye" notion has no place in our constitutionally mediated criminal justice system, and capital punishment doesn't achieve any valid societal goals.
- **Restorative & Reformatory Justice loses focus on death penalty** as the ultimate measure of justice to victims, the restorative and rehabilitative aspects of justice are forgotten through which accused behaviour can be changed.
- **Reliance on the death penalty** diverts attention from other problems ailing the criminal justice system such as poor investigation, crime prevention and rights of victims of crime.
- **Death Sentence disproportional for Vulnerable Sections:** The vagaries of the system also operate

disproportionately against the socially and economically marginalized who may lack the resources to effectively advocate their rights within an adversarial criminal justice system.

Arguments in Favour of Capital Punishment	Arguments Against Capital Punishment
<ul style="list-style-type: none"> <li>• <b>It is based on deterrent theory of punishment:</b> and instills fear of punishment including death among wrong doers.</li> <li>• <b>Morally Wrong:</b> Keeping an accused of heinous crimes alive at the cost of the lives of number of citizens or potential victims in the society is morally wrong.</li> <li>• <b>Article 21:</b> Death Penalty in India in accordance with Article 21 and is also used in Rarest of the Rare Cases.</li> <li>• <b>Death Penalty allows for Right to Appeal:</b> Indian laws and the constitution allow for appeal against the decision of High Court and even Supreme Court. Article 72(c) allows the convict to appeal against the decision of Supreme Court to the President of India if death sentence has been awarded.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Ensures Retribution by State:</b> It ensures retributive justice by the state which deprives a person of his/her life based on the retributive theory of punishment. It is generally argued that retribution even by state is immoral and is a sanitized form of vengeance.</li> <li>• <b>Person suffering from Mental Illness:</b> The United Nations Commission on Human Rights calls upon countries "not to impose the death penalty on a person suffering from any form of mental disorder or to execute any such person."</li> <li>• <b>It does not help in reducing or deterring heinous crime.</b></li> <li>• <b>Time Gap:</b> Generally, there is a large gap between awarding of death penalty and execution. This keeps offenders waiting on death row</li> </ul>

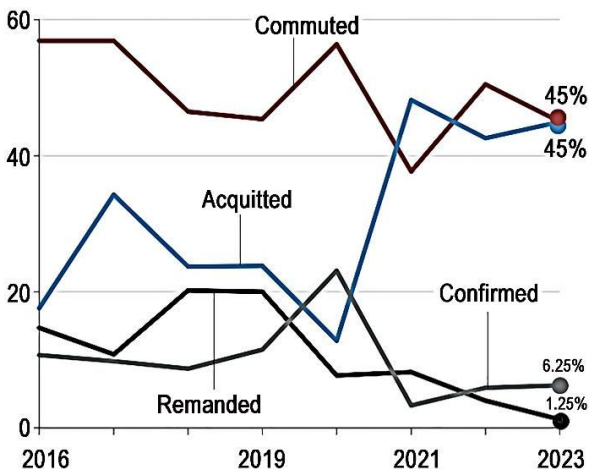
## CONSTITUTION, POLITY AND GOVERNANCE

- **Death Penalty Abolished by Most Civilized Nations:** In retaining and practicing the death penalty, India forms part of a small and ever dwindling group of nations. That 140 countries are now abolitionist in law or in practice, demonstrates that evolving standards of human dignity and decency do not support the death penalty.

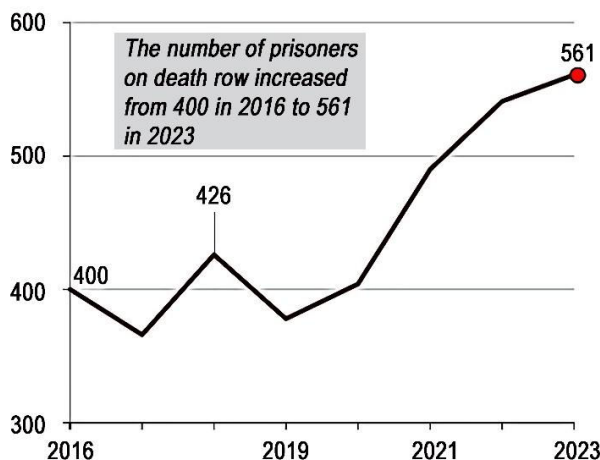
- **Death Penalty in India: Annual statistics 2023 report:**

- There were 561 prisoners on death row by end of December, 2023, which is an increase of 40% compared to 2016. This is the highest number in nearly two decades.
- Majority of cases related to sexual offences.
- In 2023, the High Courts confirmed the death sentences of 1% of prisoners, the lowest confirmation rate by appellate courts since 2000.
- Trials courts-imposed death sentences in 87% of cases in the absence of any information relating to the accused., which is in contrast to Supreme Court's mandate in Manoj vs State of Madhya Pradesh case.
- Also, the Bhartiya Nyaya Sanhita, 2023 has increased the number of offences punishable by death to 18 from 12 under IPC, 1860.
- Internationally, countries like Ghana, Kenya and Malaysia have passed bills to ban death penalty. Whereas, China executed the most number of death row inmates in 2022.

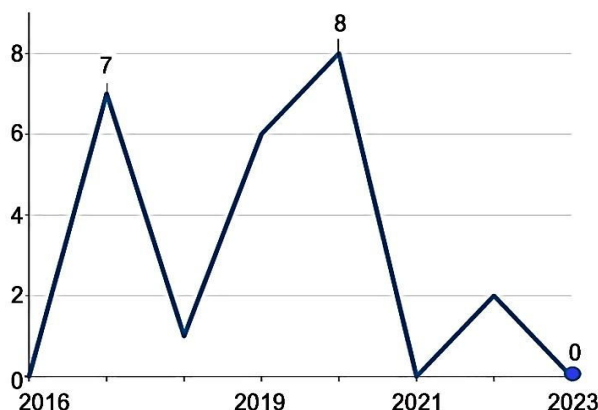
**Chart 1:** The share of prisoners whose death sentences were confirmed, commuted and remitted by the High Court. It also shows the share of prisoners on death row who were acquitted



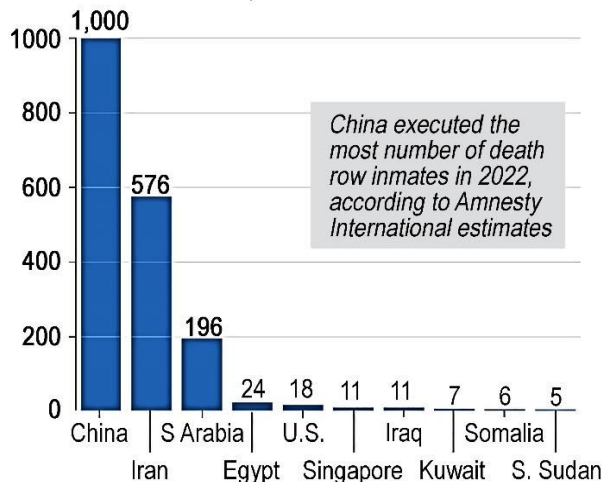
**Chart 2:** The chart shows the number of prisoners on death row as on December 31 each year



**Chart 3:** The chart shows the number of death penalty cases confirmed each year by the Supreme Court



**Chart 4:** The chart shows the top ten countries with the highest number of executions of prisoners on death row in 2022



## CONSTITUTION, POLITY AND GOVERNANCE

Overall, the issue of capital punishment is complex and requires a nuanced approach that takes into account the views of all stakeholders, including the victims and their families. Ultimately, the decision on capital punishment in India should be based on a thorough analysis of its effectiveness, fairness, and compatibility with human rights standards.

## FORESTS UNDER INDIAN JURISPRUDENCE

#VULNERABLE SECTIONS

PRIMARY  
SOURCE THE HINDU

*The notification of Thanthai Periyar Sanctuary in Erode district of Tamil Nadu triggered protests from forest dwellers. They expressed fear that this is a prelude to their rights under Forest Rights Act, 2006 being denied.*

### HISTORICAL BACKGROUND

- Tribals and other traditional forest dwellers have been residing in deep forests since eternity.
- Along with their stay, they have also come to develop unique mutualistic relationship with the forest in terms of their dependence on forest resources.
- As the British rule started hunting for resources, they constrained the entry of Indians, especially tribals into the forests. Hence, fury of acts and policies such as the Indian Forest Act of 1927 curtailed centuries-old, customary-use rights of local communities.
- This continued even after independence till much later until enactment of The Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006.
  - Through Forests Act such as **Forests Act (1865)**, and **Indian Forests Act (1878)** restricted tribal access to forests and natural resources, further affecting their traditional hunting, gathering, and agricultural practices like jhum cultivation.
  - The forests were later categorised as **excluded and partially excluded areas**. Indian Forest Act, 1927 was enacted which further restricted the tribal's access to forests.

### MAJOR ACTS RELATED TO FORESTS AND FOREST RIGHTS OF TRIBALS

#### 1. Indian Forest Act, 1927

- Provides a legal framework for:
  - Protection and management of forest.
  - Transit of forest produce and timber.
  - Duty leviable on timber and other forest produce.
- Provides procedures to be followed for declaring an area to be a **Reserved Forest, Protected Forest** or **Village Forest**.
- **Defines forest offence** as, acts prohibited inside a Reserved Forest, and penalties leviable on violation of the provisions of the Act.

**NOTE:** There is **no definition of forest** in the act.

#### 2. Forest Conservation Act, 1980

- The Forest (Conservation) Act, 1980, came into force to provide for the conservation of forests in India.
- The Act prohibits state and other authorities, except with the prior approval of the Central Government, to give any order directing:
  - de-reservation of forest.
  - use of forest land for non-forest purpose.
  - assigning any forest land or its portion by way of lease to any private person or organization.
  - Clearing of trees which have grown naturally in forested land
  - Any diversion of land for non-forest purpose requires approval under the Act as well as payment of stipulated compensatory levies such as Net Present Value (NPV), Compensatory Afforestation (CA), etc.
- **Power to make rules:** The Act empowers Central Government to make rules for carrying out the provisions of this Act.
- **Definition of Non-forest purpose:** It means the breaking up or clearing of any forest land for the cultivation of tea, coffee, spices, medicinal plants, etc. and for any purpose other than reforestation.
- Non-forest purposes don't include work relating or ancillary to conservation, development and management of forests and wildlife like establishment of check-posts, fire lines, wireless communications and construction of fencing, etc.

## CONSTITUTION, POLITY AND GOVERNANCE

- **Constitution of Advisory Committee:** The Central Government may constitute a Committee consisting of to advise that Government for the grant of approval and any other matter connected with the conservation of forests.
- **Penalties:** Contravention of any of the provisions of the Act is punishable imprisonment of up to fifteen days.
- **Offences** by the Authorities and Government Departments are punishable as well.
- **Appeal:** Any person aggrieved may file an appeal to the National Green Tribunal.
- **Infringement on right of states:** The amendments propose changes in recording of land revenue. However, land revenue is categorically a State subject in Schedule VII of the Constitution.

### FOREST CONSERVATION AMENDMENT BILL, 2023

- The Bill amends the Forest (Conservation) Act, 1980 to make it applicable to certain types of land. These include land notified as a forest under the Indian Forest Act, 1927 or in government records after the 1980 Act came into effect. The Act will not be applicable for land converted to non-forest use before December 12, 1996.

### KEY FEATURES

- **Exemptions** - It **exempts certain types of land, for e.g. land within 100 km of India's border** needed for national security projects, small roadside amenities, and public roads leading to a habitation.
- **Approval from centre** - The **state government requires prior approval** of the **central government** to assign any forest land to a private entity. The Bill extends this to all entities, and allows the assignment to be made on terms and conditions specified by the central government.
- **Activities in forests** - The Act specifies some activities that can be carried out in forests, such as establishing check posts, fencing, and bridges. The Bill also **allows running zoos, safaris and eco-tourism facilities**.
- **Power to issue directions** - The Bill adds that the central government may issue directions for the implementation of the Act to any authority/organisation under or recognised by the centre, state, or union territory (UT).

### KEY ISSUES AND ANALYSIS

- The Bill excludes two categories of land from the purview of the Act: land recorded as forest before October 25, 1980 but not notified as a forest, and land which changed from forest-use to non-forest-use before December 12, 1996. This provision may go against a 1996 Supreme Court judgement on preventing deforestation.
- Exempting land near border areas for national security projects may adversely impact the forest cover and wildlife in north-eastern states.
- A blanket exemption for projects like zoos may adversely affect forest land and wildlife.

### 3. Forest Rights Act, 2006

- The act recognises and vests the forest rights and occupation in Forest land in Forest Dwelling Scheduled Tribes (FDST) and Other Traditional Forest Dwellers (OTFD) who have been residing in such forests for generations.
- The act also establishes the responsibilities and authority for sustainable use, conservation of biodiversity and maintenance of ecological balance of FDST and OTFD.
- Strengthens the conservation regime of the forests while ensuring livelihood and food security of the FDST and OTFD.
- It seeks to rectify colonial injustice to the FDST and OTFD who are integral to the very survival and sustainability of the forest ecosystem.

### THE ACT IDENTIFY FOUR TYPES OF RIGHTS

- **Title rights:** Gives FDST and OTFD, the right to ownership of land farmed by tribals or forest dwellers subject to a maximum of 4 hectares. Ownership is only for land that is being cultivated by the concerned family and no new lands will be granted. It also provides for Community rights over minor forest produce and other resources.
- **Use rights:** The rights of the dwellers extend to extracting Minor Forest Produce, grazing areas, pastoralist routes, etc.
- **Relief and development rights:** To rehabilitation in case of illegal eviction or forced displacement and to basic amenities, subject to restrictions for forest protection.

## CONSTITUTION, POLITY AND GOVERNANCE

- **Forest management rights:** It includes the right to protect, regenerate or conserve or manage any community forest resource which they have been traditionally protecting and conserving for sustainable use.

### WHO CAN CLAIM THESE RIGHTS?

- Members of the community of Scheduled Tribes who primarily reside in and who depend on the forests or forest lands for bona fide livelihood needs.
- It can also be claimed by any member or community who has for at least three generations (75 years) before the 13th day of December 2005 primarily resided in forest land for bona fide livelihood needs.
- The Gram Sabha is the authority to initiate the process for determining the nature and extent of Individual Forest Rights (IFR) Community Forest Rights (CFR) or both that may be given to FDST and OTFD.

### CRITICAL WILDLIFE HABITAT (CWH)

Forest Rights Act, 2006 (FRA) defines CWHs as 'areas of national parks and sanctuaries where it has been specifically and established, case by case, based on scientific and objective criteria, that such areas are required to be kept as inviolate for wildlife conservation.

To notify a CWH, the Act requires state governments to establish that the presence of right-holders is causing irreversible damage to wildlife and their habitats and that co-existence between rights-holders and wildlife was not a reasonable option.

### NOTIFYING CWHs: KEY FEATURES OF GUIDELINES

- Chief Wildlife Warden of a state will notify an Expert Committee for identification of critical wildlife habitats (CWH) in a national park or sanctuary.
- The Expert Committee will identify areas within national parks and sanctuaries, based on scientific and objective criteria relevant to the protected area, required to be kept inviolate for wildlife conservation.
- The Expert Committee shall issue a public notice to notify CWH. The public notice shall include details of areas required to be kept inviolate, criteria adopted for CWH identification, implication of the notification on existing rights, and all options of resettlement and rehabilitation schemes, if applicable.

### ISSUES AND CONCERNS

In the existing guidelines, CWH notification does not stand any public scrutiny once consultations have been carried out. Contrast this to the notification of Eco-Sensitive Zones (ESZ) around protected areas, where the draft notification of every ESZ is put up in public domain for at least 60 days before its finalisation. ESZ is often notified under Environment Protection Act, 1986.

### ISSUES WITH FOREST RIGHTS AND FOREST CONSERVATION IN INDIA

#### • Case study of Tamil Nadu:

- Tamil Nadu has been one of the most laggard states in implementing the FRA, 2006 in the country.
- The notification of the Thanthai Periyar sanctuary has led to restriction on forest rights of tribals and other forest dwellers.
- So, these communities no longer enjoy grazing rights in the notified sanctuary
- **NOTE: Sanctuaries and national parks are notified under Wildlife (Protection) Act, 1972. People inside the sanctuaries continue to enjoy all their rights unless prohibited, but they don't in national parks.**

#### • Other Issues:

- High rate of rejection- As per the data of Ministry of tribal affairs, 50% of claims made under the FRA since 2007 have been rejected.
- Administrative issues- The reluctance of higher officials to give up their control over the process has led to lethargic implementation of the act.
- Literacy issues- the lack of literacy among the tribals and lack of awareness about the provisions of the act.
- Technological issues- lack of digitalised maps and the deficiency of skills among the local level officials
- Hierarchical blockage - the three-tier mechanism of the act for completing the process of granting the forest rights has delayed its efficient implementation.
- Misuse of loopholes- there have been reports of forest officials intentionally declaring forest area as critical wildlife habitat to deprive the tribals of their legitimate forest rights.



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**CONSTITUTION, POLITY AND  
GOVERNANCE**

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**PRELIMS POINTERS**

- In 1990, the Union Ministry of environment and forests had ordered that all forest villages converted to revenue villages.
- The Forest Rights Act, 2006 also the forest villages to be converted to revenue villages.
- People inside wildlife sanctuaries enjoy all their rights unless prohibited otherwise but they don't enjoy such rights in national park.
- The forest Right Act, 2006 requires and authorises the Gram Sabha to determine and recognise forest rights, protect and preserve the forests. But, earlier these rights were vested with forest department.
- The provisions of Forest Right Act, 2006 override the provisions of wildlife protection act, 1972. So, all provisions in the wildlife act, 1972 that contravene FRA provisions are null and void.
- The violations of rights of tribals under FRA, 2006 are also crime under Schedule castes and Schedule tribes (Prevention of Atrocities) Act, 1989.
- **Thanthai Periyar Sanctuary (Tamil Nadu)** is located between the Sathyamangalam tiger reserve of Tamil Nadu, the Male Mahadeshwara wildlife sanctuary and Cauvery Wildlife Sanctuary of Karnataka.

**PRACTICE QUESTIONS****MCQS****Q1. Consider the following statements regarding Privileges committee of the Parliament:**

1. The Lok Sabha Committee has 10 members, while the Rajya Sabha committee has 15 members.
2. The Presiding officer of the house refers the issue of defection to it.
3. In Rajya Sabha, it is headed by Deputy Chairperson, while in Lok Sabha, there is no such rule.

How many of the statements given above is/are correct:

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

**Q2. Consider the following statements:**

1. Article 15(4) and Article 15(5) provide for reservation to Socially and Educationally Backward classes and SC/STs in admission to educational institutions.
2. Article 16(4) provides for reservation to economically weaker sections of society in admission to educational institutions, added through 103rd constitutional amendment.

3. Article 15(6) provides for reservation to backward classes and SC/STs in public employment.

How many of the statements given above is/are correct:

- (a) Only one
- (b) Only two
- (c) All three
- (d) None

**Q3. Consider the following statements:**

1. Article 176 of the constitution provides for customary address by Governor in State assembly.
2. Governor has discretionary power in reading out the text of the address and is officially held liable for text of the address.

Which of the following statements is/are correct?

- (a) Only 1
- (b) Only 2
- (c) Both 1 and 2
- (d) None

**Q4. Consider the following statements:**

## CONSTITUTION, POLITY AND GOVERNANCE

- |   |                  |
|---|------------------|
| 1. Wildlife protection act, 1972 has overriding effect on Forest Right Act, 2006.   | (a) Only 1       |
| 2. The violations of rights of tribals under FRA, 2006 are also crime under Schedule castes and Schedule tribes (Prevention of Atrocities) Act, 1989. | (b) Only 2       |
|   | (c) Both 1 and 2 |
|   | (d) None         |

Which of the following statements are correct:

## DESCRIPTIVE QUESTIONS

- Q1.** There has been a persistent contestation between the tribals and government's forest policy since colonial times to present times. In this context, highlight the major provisions of Forest Right Act, 2006 and the issues in its implementation with the help of relevant examples.
- Q2.** Parliament is indispensable to the healthy functioning of democracy. But, the recent trends suggest a grim situation of its democratic role. In this light, explain the set of parliamentary reforms that can help in reversing the trend of declining productivity of Parliament.

**Answers:** 1-b, 2-a, 3-a, 4-b

# INTERNATIONAL RELATIONS & SECURITY

# GS PAPER (PRELIMS) & GS PAPER II & III (MAIN)

## MARITIME PIRACY: GREAT SECURITY CHALLENGE

#SECURITY #PIRACY

PRIMARY SOURCE The Indian EXPRESS

*Recent years have witnessed pirate attacks in key waterways like the west coast of Africa, Gulf of Aden, Horn of Africa, Bangladesh, and the Strait of Malacca, highlighting persistent challenges to maritime security.*



### WHAT IS MARITIME PIRACY?

It refers to criminal acts of robbery, violence, or other illicit activities committed at sea. These acts are typically carried out by individuals or groups known as pirates, who attack ships, seafarers, or coastal areas with the intent of stealing cargo, valuables, or demanding ransom.

### REASONS FOR MARITIME PIRACY

- **Inadequate Maritime policing:** Regions such as **Gulf of Aden, Horn of Africa** often suffer from poor maritime policing, where coastal countries have weak or non-existent maritime forces.
- **High shipping traffic and choke points:** Piracy-prone areas frequently coincide with major shipping routes, particularly at choke points where geographical

features force ships to converge or slow down. **E.g.,** Strait of Malacca.

- **Economic factors and unemployment:** Poor governance, political turmoil, and economic instability in coastal regions contribute to high unemployment and poverty. In turn, desperate economic conditions may drive individuals to turn to piracy as a means of financial gain, exacerbating crime rates in these areas. **E.g.,** **Somalian region.**
- **Legal complexities in International waters:** Many piracy-prone areas are international waters, straits, or archipelagic waters falling under the jurisdiction of multiple countries. This complexity leads to challenges in legal frameworks, jurisdictional disputes, and difficulties in coordinating international efforts to combat piracy effectively.

### INDIA'S ROLE IN COUNTER PIRACY OPERATIONS

- Undoubtedly, the Indian Navy has demonstrated remarkable proactive engagement in the volatile regions off the **Horn of Africa and the Gulf of Aden.**
- Since the initiation of its **anti-piracy patrol in 2008**, the Indian Navy has consistently intervened, thwarting multiple pirate hijacking attempts on merchant ships.
- The navy's unwavering commitment is evident in ongoing operations, such as the recent coordinated rescue of the **Sri Lankan fishing trawler, Lorenzo Putha.**
- Notably, the Indian Navy played a pivotal role in pushing back the boundaries of the high-risk area in the Arabian Sea during the peak of **Somali piracy (2009-12)**, showcasing its effectiveness in ensuring maritime security and combatting piracy.

### INTERNATIONAL EFFORTS TO COMBAT PIRACY

- **The Contact Group on Piracy off the Coast of Somalia (CGPCS)** was created in 2009 pursuant to UN

## INTERNATIONAL RELATIONS & SECURITY

Security Council Resolution 1851. This voluntary, ad hoc international forum brings together countries, organizations, and industry groups with an interest in combating piracy.

- **Shared Awareness and De-confliction (SHADE) (#PrelimsFact)** is an international operational counter piracy platform, aimed to encourage partners for sharing information, and to de-conflict operations amongst counter-piracy actors.
- **Djibouti code of conduct** established under International Maritime Organisation (IMO) provides for sharing of piracy-related information, through its information sharing network against Ships in the Western Indian Ocean and the Gulf of Aden. **(#India is observer) (#PrelimsFact)**
- **United Nations Convention on the Law of the Sea (UNCLOS)** provides the framework for the repression of piracy under international law.

### WAYS TO TACKLE MARITIME PIRACY

#### Operation measures:

- **Visible presence of Maritime forces:** The mere presence of naval ships and aircraft serves as a proactive measure to dissuade pirates from carrying out attacks.
- **Warning and escort services** ensures that merchant ships transiting high-risk areas can join convoys between designated points, enhancing their safety through collective security measures.
- **Surveillance** through **Information fusion centres** ashore play a crucial role in consolidating data and intelligence, aiding in the identification and tracking of potential threats.

#### Long term measures:

- **International collaboration and communication** for sharing critical information to effectively thwart piracy attempts. **E.g.,** US coordinated Maritime coalition.
- **Good governance:** Coastal nations must work towards establishing stable political environments, implementing effective governance structures which helps in reducing poverty, and creating an environment less conducive to criminal activities.
- **Economic development:** Promoting economic development in coastal regions such as investment in infrastructure, job creation, and sustainable livelihoods can diminish the incentives for individuals to engage in criminal activities at sea.

- **Community engagement:** Involving local communities in coastal areas through awareness campaigns in order to integrate them into maritime security efforts. **E.g.,** Puntland strategy (Somalian State).

## CHANGING DYNAMICS BETWEEN USA & NATO

### #INTERNATIONAL GROUPINGS

PRIMARY SOURCE THE HINDU

*Former U.S. President Donald Trump has threatened to withdraw support to NATO due to insufficient defence spending by European allies.*

### PROPOSAL BY TRUMP AND HIS ADVISORS:

- They emphasized on reducing or withdrawing the financial aid to NATO as a large amount of funds was disbursed by the United States i.e., **68% of the total indirect funding.**
- They also proposed an **amendment to Article 3 of NATO:** Only those who meet the set defence contribution threshold can avail the protection under Article 5 i.e., attack against one NATO member as an attack against all. *(Collective defence)*

### RESPONSE BY EUROPEAN MEMBERS OF NATO

- They have pledged \$380 billion to boost the defence capabilities.
- They have also agreed to spend 2% of their GDP on defence. (a target introduced in 2006, but not met by the majority of the members)
- Germany and Finland gave assurance that they will boost their military expenditures.
- European members are focusing on fortifying their defence capabilities and reducing their reliance on the United States.

### REPERCUSSION OF TRUMP'S DECISION IF HE COMES IN POWER

- NATO will lose financial and military support for the United States which has helped Ukraine to stand against Russian attack (impact on security landscape of Europe).
- Considering the huge contribution from the United States, it will take decades for European members to replace the United States' military contribution.

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**INTERNATIONAL RELATIONS & SECURITY**

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- The absence of U.S. leadership raises questions about the future leadership of NATO and the establishment of a Europe-led security bloc.

## SCHENGEN VISA FOR KOSOVO

#INTERNATIONALORGANISATIONS

PRIMARY  
SOURCE

THE HINDU

SECONDARY  
SOURCE

European  
Union

Recently, Kosovo secured visa-free access to the Schengen zone in Europe, world's largest zone of free movement, becoming the **last western Balkan non-European Union nation** to waive visa requirements.

**The zone is known after Schengen, the tiny Luxembourg village bordering France and Germany, where the agreement was signed in 1985.**

Croatia, a European Union (EU) member since 2013, joined Schengen in 2023, while Romania and Bulgaria, EU members since 2007, will gain partial Schengen entry in March.

### OBSTACLE THAT KOSOVO FACED?

- The single biggest obstacle to the country's Schengen visa waiver was strong opposition from several EU members, which do not recognise the 2008 unilateral declaration of independence by the breakaway state from Serbia.
- Kosovo has not been accorded legal statehood by the UN and denied recognition by Russia and China.

### DOES SCHENGEN HAVE ONLY THE MEMBERS OF THE EU UNDER IT?

- The Schengen area comprises 27 countries, including four non-EU members: Iceland, Liechtenstein, Switzerland and Norway.
- Also there is no requirement for the EU members to mandatorily become a member of Schengen.

### ABOUT EUROPEAN UNION (EU)

- European Union (EU) is a supranational political and economic union of 27 member states that are located primarily in Europe.
- EU was established, along with its citizenship when the Maastricht Treaty came into force in 1993

### MAASTRICHT TREATY

- Treaty on European Union is signed in Maastricht in the Netherlands. It is a major milestone, setting clear rules

for the future single currency as well as for foreign and security policy and closer cooperation in justice and home affairs.

- 'European Union was officially created by the treaty, which entered into force on 1 November 1993.

### DECISION MAKING SETUP IN EUROPEAN UNION

There are 4 main decision-making institutions which lead the EU's administration. These institutions collectively provide the EU with policy direction and play different roles in the law-making process:

- the European Parliament (Brussels/ Strasbourg/ Luxembourg)
- the European Council (Brussels)
- the Council of the European Union (Brussels/ Luxembourg)
- the European Commission (Brussels/Luxembourg/ Representations across the EU)

### EU - BUDGET

The EU budget is financed from the following sources

- a proportion of each country's gross national income (GNI) in line with how wealthy they are
- customs duties on imports from outside the EU
- a small part of the value added tax collected by each EU country
- starting in 2021, a contribution based on the amount of non-recycled plastic packaging waste in each country
- other revenue, including contributions from non-EU countries to certain programmes, interest on late payments and fines, as well as any surplus from the previous year

### SPENDING

- The EU budget is mainly dedicated to investment. For this reason, the EU adopts long-term spending plans, known as multiannual financial frameworks (MFFs), that run for a period of 5-7 years.
- The EU budget finances activities that range from developing rural areas and conserving the environment to protecting external borders and promoting human rights
- The budget helps EU economies to recover from the COVID-19 crisis. The Commission, the Council and the Parliament all have a say in determining the size of the budget and how it is allocated

### HOW BIG IS THE EU ECONOMY?



## INTERNATIONAL RELATIONS & SECURITY

The European Union operates as a single market made up of 27 countries.

### TRADE

The EU27 accounts for around 14% of the world's trade in goods.

### WHAT IS ENLARGEMENT?

Enlargement happens when new countries join the European Union. This has taken place several times in the EU's history, each time transforming both the EU and the countries that join.

### WHICH COUNTRIES CAN JOIN?

Any European country can join the EU if it fulfils the membership criteria, also known as the **Copenhagen criteria**.

For the countries that are wishing to join must have

- stable institutions that can guarantee democracy, the rule of law, human rights and the protection of minorities.
- a functioning market economy and the ability to cope with the competitive pressure of the EU market.
- the ability to take on the obligations of EU membership, including the capacity to implement all EU law and adhere to the aims of the Union.

### ADMISSION OF NEW MEMBERS TO EU

#### Step 1: Candidacy

- A country wishing to join the EU must submit a membership application to the Council of the EU
- The Council then asks the European Commission to check the applicant country's ability to fulfil the membership criteria.
- Based on the Commission's recommendations, the Council decides whether to grant the country **candidate status** and to begin formal negotiations for its accession to the Union.
- **All EU Member States** must agree on this decision.

#### Step 2: Membership negotiations

- During membership negotiations, the candidate country prepares to implement EU laws and standards, also known as the **acquis**.
- The Commission monitors the candidate's progress on these reforms and keeps the Council and European Parliament informed of this through regular reports and communications.

#### Step 3: Accession

- Once the negotiations are complete, the Commission gives its opinion on whether the candidate is ready to become a Member State. If the Commission recommends that the candidate is ready, an **accession treaty** is prepared.
- The European Commission, the European Council and the European Parliament before being **signed and ratified** by all EU Member States and the candidate country.

## CDS HIGHLIGHTS NEED TO FOCUS ON SPACE SECURITY

#SECURITY

PRIMARY  
SOURCE THE HINDU

*CDS General Anil Chauhan has urged the space industry to work on counter-space capabilities.*

### CHIEF OF DEFENCE STAFF

- The office of Chief of Defence Staff was created in 2019 for bringing about greater synergy and integration among three armed forces – The Army, The Navy and The Air Force.
- CDS has been envisioned to enhance the quality of military advice to political leadership through integration of service inputs.
- Four star Late General Bipin Rawat was appointed as the first CDS of India on 31<sup>st</sup> December, 2019. Currently, General Anil Chauhan has been appointed as the CDS of India.
- **NOTE:** Kargil review committee headed by K. Subrahmanya, 1999 had recommended for creation of the post of chief of defence staff.

### Qualification:

- Serving or retired chiefs (four star officers) and three-star officers of Army, Navy or Air Force.
- The person appointed should be less than 62 years of age.
- Central government can extend the service tenure of CDS subject to maximum age limit of 65 years.
- **Important Functions:**
  - Principal Military Advisor to the Union Defence Minister on all Tri-Services matters.

## INTERNATIONAL RELATIONS & SECURITY

- Will not exercise any military command, including over the three Service Chiefs
- Act as the secretary of Department of Military Affairs
- Permanent Chairman of the Chiefs of Staff Committee
- Will command Tri-service agencies related to Cyber and Space
- Will be member of Defence Acquisition Council
- Military Adviser to the Nuclear Command Authority
- **Note:** CDS is not superior to chief of armed forces in terms of rank and does not enjoy any military command powers.

### DEPARTMENT OF MILITARY AFFAIRS

A new Department of Military Affairs was created by making amendments in the Allocation of Business Rules.

#### Mandate

- India's Armed Force.
- Integrated Headquarters of the Ministry of Defence comprising of Army Headquarters, Naval

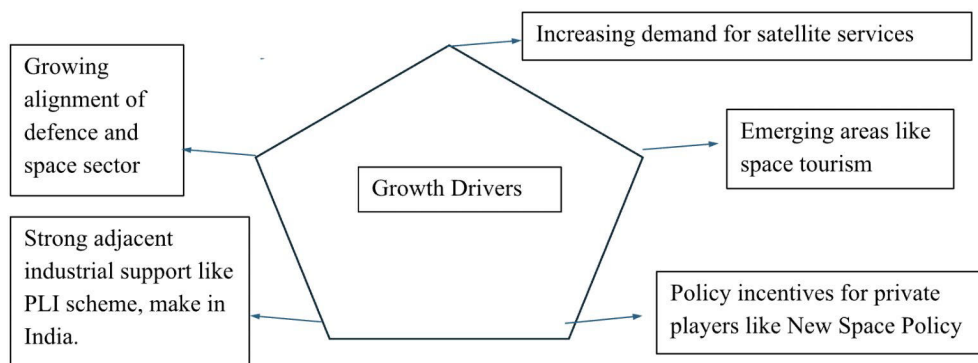
Headquarters, Air Headquarters and Defence Staff Headquarters

- Territorial Army
- Procurement exclusive to the Services except capital acquisitions,
- Promoting jointness in procurement, training and staffing
- Facilitation of restructuring of Military Commands
- Promoting use of indigenous equipment by the Services

### PRESENT SITUATION OF INDIA'S SPACE SECTOR

- Indian space economy is currently estimated to be around \$8.4 bn, which is expected to grow to \$44 bn by 2033.
- From just 1 start up in space sector in 2012, it has grown to 189 start-ups in 2023. The funding received by these start-ups reached a total of \$124.7 million in 2023 from \$67.2 million in 2021.

### GROWTH DRIVERS OF SPACE SECTOR IN INDIA



### SECURITY CHALLENGES IN THE SPACE SECTOR

- **Cyberspace threats:** With sophisticated knowledge of satellite and data distribution networks, actors can use offensive cyberspace capabilities to enable a large range of reversible and non-reversible attack on space systems.
- **Direct Energy Weapons:** Laser techniques can be used to carry out high energy driven direct attacks on space assets.
- **Electronic Warfare:** Jamming and spoofing techniques can be used to obstruct and hamper the functioning of space communication systems.
- **Kinetic Energy threats:** Anti-satellite missiles are designed to destroy the satellites without placing the weapon or any of its component in orbit of space.
- **Orbital Threat:** These are basically the satellites or systems that can deliver temporary or permanent effects against other spacecraft. Ex: kinetic kill vehicles, radiofrequency jammers, chemical sprayers, etc.
- **Rising space debris:** As per ESA's space Environment Report, 2022, over 30,000 pieces of space debris have been recorded. In this regard, the Kessler syndrome has highlighted the growing threats of space debris.

## INTERNATIONAL RELATIONS & SECURITY

### STEPS TAKEN BY INDIA IN SPACE SECURITY

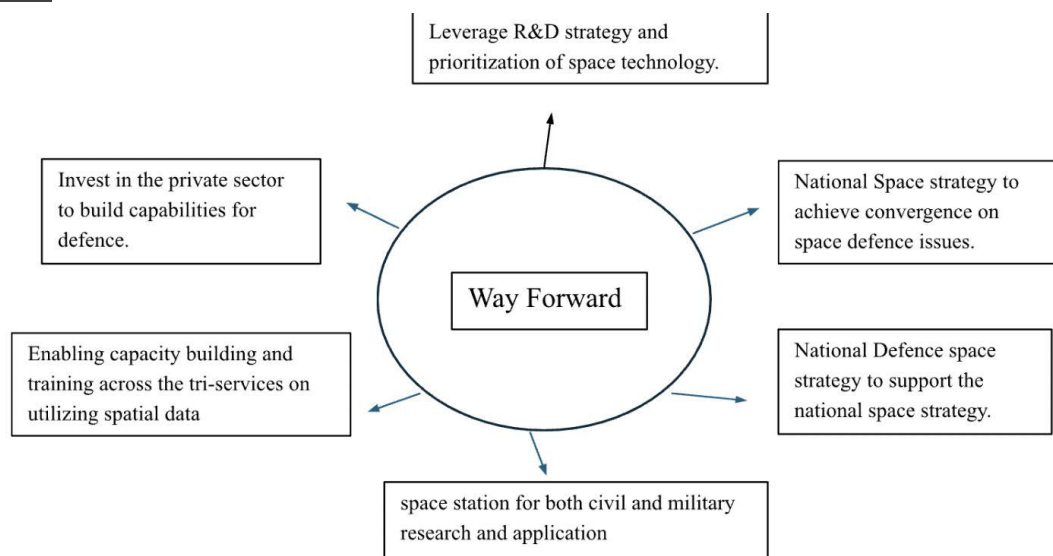
- **Institutional:** Creation of **Defence Space Agency** as a tri-service agency to work for development of systems to expand India's defensive and offensive capabilities in space.
- **Operational:** Creation of the post CDS as a military advisor on tri-service matters to develop and foster **Defence space domain in India**

greater expertise in defence matters for better and more informed decision making.

- **Capability enhancement:** Anti-satellite weapon tests by the name of **Mission Shakti** was successfully conducted by India, becoming the fourth country to do so.

Strategic	Organisational	Upstream and downstream capabilities
<ul style="list-style-type: none"> <li>• Kargil War-a turning point for use of space for military purposes</li> <li>• Publication of the 'Defence Space Vision 2020', calling for more dual-use assets and the development of dedicated military satellites</li> <li>• Work on ASAT technologies to improve its deterrence capacities</li> </ul>	<ul style="list-style-type: none"> <li>• Creation of the Integrated Space Cell within the headquarters of the Integrated Defence Staff</li> <li>• Creation of the DSA with DIPAC and DSCC</li> <li>• Creation of Defence Space Research Organisation</li> <li>• Simulated space warfare exercise - IndSpaceEx</li> <li>• Creation of INSPACe under DoS to boost private participation</li> <li>• DSA, DSRO, ISRO and INSPACe collectively form India's space strength</li> </ul>	<ul style="list-style-type: none"> <li>• Test of an ASAT missile</li> <li>• Two operational satellites: GSAT-7 (Rukmini) satellite for the Indian Navy and GSAT-7 A (Angry Bird) for the Indian Air Force</li> <li>• Navy's order to procure the GSAT-7R satellite approved - has Rukmini as communication satellite over the Indian Ocean region</li> <li>• Defence Acquisition Council (DAC) approves the proposal to procure GSAT-7C satellite for the IAF</li> </ul>

### CONCLUSION



## CHINESE INFRASTRUCTURE CREATION ALONG BORDER

#INDIANNEIGHBOURHOOD

PRIMARY SOURCE The Indian EXPRESS

SECONDARY SOURCE THE DIPLOMAT

Chinese nationals have started occupying several of their model "Xiaokang" border defence villages across India's north-eastern borders.

## INTERNATIONAL RELATIONS & SECURITY

- China has been constructing 628 such “well-off villages” along India’s borders with the Tibet Autonomous Region, including Ladakh and Arunachal Pradesh for over five years now.
- This infrastructural drive raises concern in India as the dwellings are understood to be “dual-use infrastructure” i.e. it can be used for both civil and military purposes and seen as a Chinese assertion of its territorial claims along the LAC which remains disputed between the neighbouring countries.
- China has also been constructing infrastructure, including border villages, in Bhutanese territory.

### INDIAN RESPONSE TO BORDER CONSTRUCTION

Indian government has launched Vibrant Village Programme with a three-fold objective that it aims to deliver

- **First**, Improve connectivity and basic amenities in border villages to curb migration from these areas. Lack of roads, healthcare, education and economic opportunities have led to migration of youth from border villages in search of jobs. This poses challenges for border security as it reduces the population providing intelligence inputs.
- **Second**, Boost the local economy in border villages through promotion of tourism, trade and handicrafts. This will provide livelihood support to communities living in harsh border conditions.
- **Third**, Strengthen security in border areas by enabling access for defence forces and boosting the morale of local communities. Lack of infrastructure has hampered patrolling in some border areas. Locals acting as ‘eyes and ears’ also need to feel connected to the mainstream.
- The Government of India has identified villages in the eastern part of Arunachal Pradesh, and in the Tawang region such as Zemithang, Taksing, Chayang Tajo, Tuting and Kibithu.
- Further, three major highways are at different stages of construction in Arunachal Pradesh: the Trans-Arunachal Highway; the Frontier Highway; and the East-West Industrial Corridor Highway.
- There are plans to improve connectivity to Tawang with the construction of at least two alternate axes—in addition to the existing one connecting Guwahati and Tawang.

### ABOUT LAC (LINE OF ACTUAL CONTROL)

- The LAC is the demarcation that separates Indian-controlled territory from Chinese-controlled territory. India considers the LAC to be 3,488 km long, while the Chinese consider it to be only around 2,000 km. The line is divided between the Eastern, Middle and the Western Sector.
- Initially, India rejected the concept of LAC in both 1959 and 1962. However, the LAC was discussed during Chinese Premier Li Peng’s 1991 visit to India, where PM P V Narasimha Rao and Li reached an understanding to maintain peace and tranquillity at the LAC.
- India formally accepted the concept of the LAC when PV Narasimha Rao paid a return visit to Beijing in 1993 and the two sides signed the Agreement to Maintain Peace and Tranquillity at the LAC

### WHY DID INDIA ACCEPT LAC?

- The Indian and Chinese patrols were coming in more frequent contact during the mid-1980s, after the government formed a China Study Group in 1976 which revised the patrolling limits, rules of engagement and pattern of Indian presence along the border.
- Finally due to the Sumdorongchu standoff, when PM Rajiv Gandhi visited Beijing in 1988, the two sides agreed to negotiate a border settlement, and pending that, they would maintain peace and tranquillity along the border.

### DIFFERENCE BETWEEN LOC AND LAC?

- The Line Of Control (LoC) emerged from the 1948 ceasefire line negotiated by the UN after the Kashmir War. It was designated as the LoC in 1972, following the Shimla Agreement between the two countries.
- It is delineated on a map signed by DGMOs of both armies and has the international sanctity of a legal agreement.
- The LAC, in contrast, is only a concept – it is not agreed upon by the two countries, neither delineated on a map or demarcated on the ground.

To Read more about India-China border dispute visit →



## INTERNATIONAL ECONOMY

#ECONOMY

PRIMARY  
SOURCE

THE HINDU

*This year the budget speech also made a reference to geopolitical affairs at the global level becoming more complex and challenging with wars and conflicts. Globalisation is being redefined with reshoring and friend-shoring, disruption and fragmentation of supply chains, and competition for critical minerals and technologies.*

The budget speech also made a reference to the India-Middle East-Europe Economic Corridor which will be a strategic and economic game changer for India and others.

A reference was also made to India's successful completion of the G20 summit as the country showed the way forward and built consensus on solutions for those global problems.

### GRANTS UNDER THE BUDGET

- The Indian government has allocated an estimated amount of Rs 5,667.56 crore as grants and loans to foreign governments for the fiscal year 2024-25. These investments are made primarily in India's neighbourhood, Indian ocean region and strategic extended neighbourhood.
- Bhutan has emerged as the primary recipient of Indian government grants and loans. In the fiscal year 2023-24, the government provided a loan of Rs 1,614.36 crore, surpassing the budget estimates for grants and loans in 2024-25.

#### • Top 10 receiver of grants from India

1. Bhutan: Rs 2398.97 crore
2. Maldives: Rs 770.90 crore
3. Nepal: Rs 650 crore
4. Myanmar: Rs 370 crore
5. Mauritius: Rs 330 crore
6. Afghanistan: Rs 220 crore
7. Bangladesh: Rs 130 crore
8. Sri Lanka: Rs 60 crore
9. Seychelles: Rs 9.91 crore
10. Mongolia: Rs 5 crore

### FRIEND-SHORING, RESHORING AND OFFSHORING?

Today western countries are increasingly adopting industrial policies that promote "friend-shoring" of strategic industries. This, and related terms like "nearshoring", "de-risking" and "decoupling" (mainly from China), are in vogue among economic policymakers

### FRIEND-SHORING

- When a government pushes businesses to restructure supply chains, shifting production away from geopolitical rivals to friendly powers. Friend-shoring is similar to nearshoring, which moves production closer to home. Both policies aim to strengthen trade security.
- The Biden administration ban on American investment in Chinese technology is one example of the same

**Reshoring:** Reshoring which is also known as in-shoring or onshoring, reshoring is when a business transfers operations back to its home country. This is seen as an attractive solution for companies whose businesses are impacted by changes in geo-political.

**Offshoring:** Moving business operations to another country is commonly known as offshoring. This can reduce labour costs and ensure the ready provision of certain skills. It may also mean greater proximity to certain raw materials.

## INDIA EU FTA

#INTERNATIONAL RELATIONS

PRIMARY  
SOURCE

THE HINDU

*EU-India trade talks have hit a roadblock, stagnating for over a decade. While there's a glimmer of hope with the Indian commerce minister's recent announcement to revive talks, a setback in August following the EU's ban on certain Indian pharmaceutical products has underscored the challenges. As both parties gear up for fresh discussions, the stakes remain high, politically and economically.*

- **Fresh Negotiations:** The upcoming talks are poised to delve into various critical areas, including industrial goods, agricultural tariffs, services, investment frameworks, intellectual property regulations, and sustainable development commitments. From the EU's perspective, clinching an FTA with India would mark a milestone, paving the way for enhanced integration of emerging economies into the global trade framework. Conversely, for India, the agreement aligns with Prime



## INTERNATIONAL RELATIONS &amp; SECURITY

Minister Narendra Modi's ambitious "Make in India" campaign, aiming to elevate India's status as a manufacturing powerhouse and regional leader.

- **Economic Implications:** An FTA between the EU and India holds immense potential to bolster trade and investment flows. With the EU being India's largest trading partner and investor, the economic rationale for such an agreement is compelling. However, various studies present conflicting views on the potential impact of the FTA, indicating the need for nuanced negotiations to address divergent interests and concerns.
- **Areas of Disagreement:** Despite shared economic interests, disparities persist on crucial issues such as tariffs, visa regulations, and regulatory standards. Disputes at the WTO and disagreements over tariffs on automobiles, wines, and dairy products underscore the

complexity of negotiations. Both parties have voiced concerns over restrictive measures hindering trade, necessitating a concerted effort to bridge the gap and foster greater cooperation.

- **Challenges and the Way Forward:** Navigating through these challenges requires a concerted effort from both sides. As mega-regional initiatives like the TTIP and TPP gain traction, the urgency to expedite EU-India FTA talks becomes more pronounced. Despite the obstacles, the potential benefits for both parties are substantial, necessitating a commitment to overcome differences and forge a path towards mutual prosperity. With determination and pragmatism, reaching a comprehensive agreement is indeed within reach, albeit requiring sustained efforts and cooperation from all stakeholders.

## PRELIMS NUGGETS

## 'EMIGRATION CHECK REQUIRED' (ECR COUNTRIES)

#INTERNATIONAL RELATIONS #EMIGRATION

PRIMARY SOURCE THE HINDU

*Recent incident of Indian workers having been recruited by Russian Army for participation in the Russia- Ukraine war has raised concerns regarding the vulnerable situation and exploitation of Indian emigrants as workers in foreign nations.*

### ABOUT EMIGRATION CHECK REQUIRED COUNTRIES

- Formulated under the **Emigration Act, 1983**.
- **Emigration Act 1983 has provided two bodies:**
  - **Protector General of Emigrants** - Responsible for protecting the interests of Indian workers going abroad.
  - **Protector of Emigrants** - Responsible for granting emigration clearance to the intending emigrants
- ECR nations are those countries that do not have strict laws regulating the entry and employment of foreign nationals. They also do not provide avenues for grievance redressal.

- All persons having ECR endorsed Passports and going to any of the 18 ECR countries for taking up employment require emigration clearance from the Protector of Emigrants.
- But ECR passport holders going to any ECR country for purposes other than employment do not require emigration clearance.
- Currently, **there are 18 ECR countries:**

Asia- UAE, Saudi Arabia, Qatar, Oman, Kuwait, Bahrain, Malaysia, Jordan, Yemen, Thailand, Iraq, Afghanistan, Syria, Indonesia, Lebanon.	Africa-Libya, South Sudan	Sudan,
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### ABOUT PROTECTOR GENERAL OF EMIGRANTS

- **Statutory body** under Ministry of External Affairs constituted under the **Emigration Act, 1983**.
- Responsible for protecting the interest of Indian workers going abroad.

### POWERS OF PROTECTOR GENERAL OF EMIGRANTS ARE

- Power to **grant the Registration Certificate (RC)** to recruitment agency under Section 11 and 12 of the **Emigration Act, 1983** and **renew** the same under Section 13 of the Act.

## INTERNATIONAL RELATIONS & SECURITY

- Power to **suspend, cancel and revoke the RC** under Section 14 of the Act.
- Power to issue permit to the foreign employer (FE) and Project Exporter (PE) under Chapter IV of the Act.
- Power to sanction prosecution for offences and penalties under Section 24 and 25 of the Act.
- Power to search, seize and detain persons/conveyance, etc. conferred to an officer of customs under the Customs Act, 1962.
- Power to prescribe any return, record or register for the Recruitment agency and inspect the same as well at their office under Section 36 of the Act.
- Power of civil court under Section 37 of the Act.

### PROTECTORS OF EMIGRANTS

- **Statutory body** responsible for **granting emigration clearance to the intending emigrants** as per the procedure prescribed under the Emigration Act, 1983.
- The Protectors of Emigrants shall perform the functions assigned to them by this Act **under the general superintendence and control of the Protector General of Emigrants.**

### POWERS OF PROTECTOR OF EMIGRANTS ARE

- To protect and aid with his advice all intending emigrants and emigrants.
- Oversee all the provisions of this Act and of the rules made there under to be compiled with.
- Inspect, to an extent and in a manner as may be prescribed-any emigrant conveyance, or any other conveyance if he has reason to believe that any intending emigrant or emigrants are proceeding from, or returning to, India, to or from a place outside India by such other conveyance.
- Inquire into the treatment received by emigrants during their voyage or journey to, and during the period of their residence in the country to which they emigrated and also during the return voyage or journey to India and report thereon to the Protector General of Emigrants or such other authority as may be prescribed.
- Aid and advise emigrants who have returned to India.

### LIST OF PERSONS EXEMPTED FROM ECR PROVISIONS

- Holders of Diplomatic/Official Passports.
- **Gazetted Government Servants. (1)**

- **Income-tax payers** (including Agricultural Income Tax payees) in their individual capacity. **(2)**
- **All professional degree holders**, such as Doctors holding **MBBS** degrees or Degrees in **Ayurved or Homoeopathy**; Accredited **Journalists**; **Engineers**; **Chartered Accountants**; **Lecturers**; **Teachers**; **Scientists**; **Advocates** etc. **(3)**
- Spouses and dependent children of the category of persons listed from **(1) to (3).**
- **Persons holding class 10 or higher qualification.**
- Persons **holding permanent immigration Visas**, such as the visas of UK, USA and Australia.
- Persons possessing two years diploma from any institute recognized by the National Council for Vocational Training (NCVT) or State Council of Vocational Training (SCVT) or persons holding three years diploma/equivalent degree from institutions like Polytechnics recognized by Central/State Governments.
- **Nurses** possessing qualification recognized under the **Indian Nursing Council Act, 1947.**
- All **persons above** the age of **50 years.**
- All persons who have been **staying abroad for more than three years** (the period of three years could be either in one stretch or broken) and their spouses.
- **Children below 18 years** of age.

## INDIA – US CIVIL NUCLEAR COOPERATION

### #BILATERAL RELATIONS

PRIMARY SOURCE THE HINDU

*U.S. Assistant Secretary of State for Energy Resources, emphasized the significance of the India-U.S. nuclear cooperation, which was initiated two decades ago, labelling it as "an important piece of unfinished business".*

### INDIA US CIVIL NUCLEAR COOPERATION: 2008

- The **123 Agreement** signed between the United States of America and the Republic of India is known as the **U.S.-India Civil Nuclear Agreement** or Indo-US nuclear deal.
- Under this, India agreed to separate its civil and military nuclear facilities and to place all its civil nuclear facilities under International Atomic Energy Agency (IAEA)

## INTERNATIONAL RELATIONS &amp; SECURITY

safeguards and, in exchange, the United States agreed to work toward full civil nuclear cooperation with India.

**Note:** The Agreement entails no obligations for India to sign Comprehensive Nuclear-Test-Ban Treaty (CTBT) and does not grant any waiver for India to join Nuclear Suppliers Group (NSG).

## KALADAN MULTIMODAL TRANSIT TRANSPORT PROJECT

#CONNECTIVITY PROJECTS

PRIMARY  
SOURCE THE HINDU

Kaladan Multimodal Project has suffered a setback due to the capture of a Paletwa town in Myanmar by a rebel group.

### ABOUT KALADAN MULTIMODAL TRANSIT TRANSPORT PROJECT (KMTTP)



- It will connect the eastern Indian seaport of **Kolkata** with **Sittwe seaport** in Rakhine State, Myanmar by sea.
- In Myanmar, it will then link Sittwe seaport to Paletwa in Chin State via the Kaladan river boat route, and then **from Paletwa by road to Mizoram** state in Northeast India.
- It will reduce distance from Kolkata to Sittwe by approximately 1,328 km and will reduce the need to transport goods through the narrow Siliguri corridor, also known as **Chicken's Neck**.

## EUROPE FREE TRADE ASSOCIATION (EFTA)

#INTERNATIONAL GROUPING

PRIMARY  
SOURCE THE HINDU

In a draft of the India – EFTA free trade agreement, a clause may postpone the access to affordable generic drugs in India for six years.



### ABOUT EUROPE FREE TRADE ASSOCIATION (EFTA)

- It is the **intergovernmental** organisation set up in 1960 (**through Stockholm Convention**) for the promotion of free trade and economic integration between its members.
- Members: **Iceland, Liechtenstein, Norway and Switzerland**.
- It **does not** envisage political integration.
- It does not issue legislation, **nor does it establish a customs union**.
- EFTA States are **not obliged by the EFTA Convention** to conclude preferential trade agreements as a group. They maintain the full right to enter into bilateral third-country arrangements.
- The **EFTA Council** is the highest governing body of EFTA, usually meets eight times a year at the ambassadorial level (heads of permanent delegations to EFTA) and twice a year at Ministerial level. Each Member State is represented and **decisions are taken by consensus**.
- The **Chairmanship rotates every six months**. For the EFTA Council, the chairmanship rotates between Iceland, Norway, Liechtenstein and Switzerland.
- Secretariat:** Geneva, Austria.

## PANCHESHWAR MULTIPURPOSE PROJECT (PMP)

#BILATERAL RELATIONS

PRIMARY  
SOURCE THE HINDU

India and Nepal signed an agreement on long term power sharing without making any forward movement on Pancheshwar Multipurpose project.

### ABOUT PANCHESHWAR MULTIPURPOSE PROJECT (PMP)

**INTERNATIONAL RELATIONS & SECURITY**

- It is a bi-national hydropower project to be developed on **Mahakali River** bordering Nepal and India.
- Development of PMP is covered under integrated **Mahakali Treaty** signed between Nepal and India according to which, equal sizes of underground power house i.e. of 3240MW will be constructed on each side of Mahakali river in India and Nepal.
- It offers benefit of regulated water for irrigation to a vast area of agricultural land both in Nepal and India along with benefit of flood control at downstream.

**ABOUT MAHAKALI TREATY**

- It is an agreement signed in 1996 between the Government of Nepal and the Government of India regarding the development of watershed of Mahakali River.
- It calls for an **integrated development of barrage, dams and hydropower** for mutual cooperation of the two countries by managing the water resources.
- It **recognizes the Mahakali River as a boundary river between the two countries.**

**ABOUT MAHAKALI OR SHARDA RIVER**

- The Sharda River, also called Kali River and Mahakali River, **originates at Kalapani in the Himalayas** in the **Pithoragarh district in Uttarakhand, India.**
- It flows along Nepal's western border with India.
- It **joins the Ghaghra River, a tributary of the Ganges.**
- It takes the name Kali River from the union of the two streams at Gunji as it flows through the hills. After Brahmadev Mandi near Tanakpur, it enters the Terai plains, where it is called the Sharda River.

**NB8 VISIT TO INDIA**

#INTERNATIONAL RELATIONS

**PRIMARY SOURCE** **THE HINDU**

*Amidst the geopolitical landscape reshaped by Russia's full-scale invasion of Ukraine two years ago, the urgency of collaboration with global partners has never been more evident. The representatives of the Nordic-Baltic cooperation, known as the NB8, gather in New Delhi and underscores the vital importance of trust, dialogue, and cooperation in times of upheaval and conflict.*

**Nordic-Baltic cooperation or NB8** is a regional cooperation format which as of **1992** has brought together **five Nordic countries and three Baltic**

**countries (Finland, Sweden, Norway, Iceland, Denmark, Estonia, Latvia and Lithuania)** in order to discuss important regional and international issues in an informal atmosphere.

**RUSSIA CAPTURES  
AVDIIVKA**

#INTERNATIONAL RELATIONS

**PRIMARY SOURCE** **The Indian EXPRESS**

*Russia has registered a big victory, capturing Avdiivka town.*

**AVDIIVKA**

- It is a city in **Donetsk Oblast, Ukraine.**
- The city is located in the centre of the oblast, just north of the regional centre, Donetsk.
- The battle of Avdiivka was a major battle between the Russian Armed Forces and Russian-controlled Donbas militias on one side and the Ukrainian Armed Forces on the other.
- It is described as a "gateway" to the nearby provincial capital of Donetsk.

**GREYZONE WARFARE**

#INTERNATIONAL RELATIONS

**PRIMARY SOURCE** **THE HINDU**

*In the realm of military terminology, the term 'grey-zone warfare' has emerged as a recent addition, influenced by events unfolding in the South China Sea and along India's northern borders.*



**INTERNATIONAL RELATIONS & SECURITY**

- The grey zone describes a set of activities that **occur between peace (or cooperation) and war (or armed conflict)**.
- A multitude of activities fall into this murky in-between—from nefarious economic activities, influence operations, and cyberattacks to mercenary operations, assassinations, and disinformation campaigns.
- Generally, grey-zone activities are considered gradualist campaigns by state and non-state actors that combine non-military and quasi-military tools and **fall below the threshold of armed conflict**.
- They aim to thwart, destabilize, weaken, or attack an adversary, and they are often tailored toward the vulnerabilities of the target state.

**PRACTICE QUESTIONS****MCQS**

**Q1. With reference to the India – U.S. Civil Nuclear Agreement of 2008, Consider the following statements:**

1. The agreement entails obligations for India to sign Comprehensive Nuclear-Test-Ban Treaty (CTBT).
2. It granted waiver to India to join Nuclear Suppliers Group (NSG).

Which of the statements given above is/are correct?

- (a) 1 only (b) 2 only  
(c) Both 1 and 2 (d) Neither 1 nor 2

**Q2. With reference to the Kaladan Multimodal Transit Transport Project (KMTTP), consider the following statements:**

1. It connects the Indian seaport of Kolkata with Sittwe seaport in Rakhine State, Myanmar.
2. The project is being piloted and funded by the World Bank.

Which of the statements given above is/are correct?

- (a) 1 only (b) 2 only  
(c) Both 1 and 2 (d) Neither 1 nor 2

**Q3. Consider the following:**

1. Iceland
2. Norway

3. Denmark
4. Sweden
5. Switzerland

How many of the countries mentioned above forms the part of Europe Free Trade Association (EFTA)?

- (a) Only two (b) Only three  
(c) Only four (d) All five

**Q4. With reference to the Pancheshwar Multipurpose Project (PMP), consider the following statements:**

1. It is a tri-national hydropower project to be developed by India, Nepal and Bhutan.
2. It is being developed on Mahakali river.

Which of the statements given above is/are correct?

- (a) 1 only (b) 2 only  
(c) Both 1 and 2 (d) Neither 1 nor 2

**Q5. The terms 'SHADE and 'Djibouti Code, sometimes appearing in news, are used in relation to**

- (a) Combating war crimes  
(b) Cyber security  
(c) Regulation on cryptocurrencies  
(d) Maritime security

**DESCRIPTIVE QUESTIONS**

- Q1.** Discuss the multifaceted challenges associated with ensuring maritime security in 21st century, and evaluate potential policy measures to enhance maritime safety and stability on a global scale.
- Q2.** To what extent do historical, geopolitical, and strategic factors influence the ongoing border dispute between India and China, and what measures can be adopted to address the border issues effectively?

**Answers :** 1-d, 2-a, 3-b, 4-b, 5-d



# SOCIETY AND SOCIAL JUSTICE

# GS PAPER I & GS PAPER II (MAIN)

## SWACHH BHARAT MISSION – GRAMIN

#GOVERNMENT SCHEMES

PRIMARY  
SOURCE THE HINDU

Swachh Bharat Mission – Gramin was launched by the **Department of Drinking Water & Sanitation under the Union Ministry of Jal Shakti** to promote sanitation and waste management in rural India.

### SWACHH BHARAT MISSION - GRAMIN

- Launched on 2<sup>nd</sup> October, 2014 as a restructured Nirmal Bharat Abhiyan.
- Target to achieve ODF status of 100% villages by 2019 and rightly achieved so.
- Phase-2 launched in 2020 to focus on sustaining the changes and the solid and liquid waste management till 2024-25 i.e. moving from ODF to ODF Plus.



### STEPS TAKEN TO PROMOTE SANITATION IN INDIA

- **Rural Sanitation Program (1986)** which was a highly subsidised scheme to promote sanitation.
- **Total Sanitation Scheme (1999):** Focused on demand driven approach to sanitation.
- **Swachh Bharat Abhiyaan (2014):** Focused on addressing the concerns of sanitation in a mission mode.

### ACHIEVEMENTS OF SWACHH BHARAT ABHIYAN

- India declared open defecation free on 2<sup>nd</sup> October 2019.

- More than 10 crore toilets were constructed under the rural phase.
- Sanitation coverage improved from 39% in 2014 to 100% in 2019 in India (National Annual Rural Sanitation Survey).
- Generated awareness regarding safe sanitation practices.
- Contributing to the reduction of multi-dimensional poverty in India (NITI Aayog), 13.5 crore people came out of multi-dimensional poverty between 2015-16 and 2019-21.

### CHALLENGES WITH SANITATION CAMPAIGN IN INDIA

- Lack of focus on behavioural change in the SBM in terms of the usage of the constructed toilets.
- Only 85% of the rural population used safe, functional and hygienic toilets (NARSS 2019-20).
- Surveys reveal that it is still common to find individuals who refrain from using toilets. At least one member in 38% of the households in Bihar, 50% in Gujarat and 14% in Telangana did not use constructed toilet according to a 2018 Survey.

### REASONS FOR NOT USING THE TOILETS

- Large household size and overcrowding prevents multiple users from using the toilets. According to a survey, only 3-4% households have more than one toilet.
- Social norms and social stigma associated with using the toilet at home. Eg. toilet- ek prem katha movie.
- **Poor quality of toilets built:** According to a survey, 17% of households in Gujarat reported that sub-structure had collapsed while 50% households reported that the pits were full.
- Detached bathroom and lack of access to water facility.
- Unhygienic facility, not having any superstructure, facility malfunctioning and personal reasons (NSO Survey).
- Lack of synergy between different schemes associated with sanitation promotion. Ex:- no relation has been

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**SOCIETY AND SOCIAL JUSTICE**

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observed between the per capita central expenses made on the Jal Jeevan mission for providing tap water to each household and the percentage of villages declared ODF plus across states.

- Swachh Bharat Mission - Phase 2 has no criteria for mandating multiple toilets for households. Also, there is no provision for building an attached bathroom under the scheme.

**WAY FORWARD**

- **Dual focused approach:** There needs to be a focus on both construction of toilets and their continuing usage by the communities.
- Collective behavioural change needs to be focused upon as behavioural change in sanitation cannot happen independently. So, social networks and living standards needs to be improved upon.
- Similarly, a synergy has to be developed between the various schemes related to sanitation for a coordinated output.
- An impact or performance audit to the program can be done to fill the loopholes as highlighted in the phase 2 of Swachh Bharat abhiyan.
- Mandating construction of multiple toilets with households with large population and joint families.
- Ensuring running water connection under the Jal Jeevan Mission to ensure continued usage of toilets built under SBM.

Going forward, efficient and coordinated implementation of sanitation programs in India can help in achieving the Sustainable development goal-6 i.e. clean water and sanitation, thereby fulfilling the promise of Viksit Bharat Sankalp.

## TAKE HOME RATION MODEL OF UP FOR ADDRESSING MALNUTRITION

#HEALTH #PRIMARY

PRIMARY  
SOURCE THE HINDU

Uttar Pradesh is a remarkable example of the importance of women's empowerment in tackling malnutrition by

supporting community-based micro enterprises led by self-help groups.

**ABOUT MALNUTRITION****According to the World Health Organisation:**

- It refers to deficiencies, excesses or imbalances in a person's intake of energy and/or nutrients.
- The term malnutrition covers 2 broad groups of conditions:
  - **One is 'undernutrition':** Includes stunting (low height for age), wasting (low weight for height), underweight (low weight for age) and micronutrient deficiencies or insufficiencies (a lack of important vitamins and minerals).
  - **The other is overweight, obesity and diet-related noncommunicable diseases (such as heart disease, stroke, diabetes, and cancer).**
- Conditions such as celiac disease and infections like h. pylori or worm infestations can disturb the digestive system, leading to nutrient deficiencies.
- Malnutrition caused by micronutrient deficiency has inter-generational impacts - anaemic mothers are known to give birth to anaemic babies.
- Severe acute malnutrition (SAM) is defined by a very low weight for height, severe visible wasting, or the presence of nutritional oedema.

**EXTENT OF MALNUTRITION IN INDIA**

- According to UNICEF, India was at the 10th spot among countries with the highest number of underweight children, and at the 17th spot for the highest number of stunted children in the world.
- According to National Family Health Survey 5, from 38.4% to 35.5% of children under age five years are stunted, 21.0% to 19.3% are wasted, 35.8% to 32.1% are underweight and 3% are overweight.
- 7.7 percent of children in the country are affected by SAM.
- Among adults, 23% of women and 20% of men are considered undernourished in India. On the other hand, 21% of women and 19% of men are overweight or obese.

**CHALLENGES IN TACKLING MALNOURISHMENT IN INDIA**

- **Issues with ICDS:** Lack of quality food supply and uniform distribution of food.

## SOCIETY AND SOCIAL JUSTICE

- Anganwadi workers' effectiveness in addressing malnutrition is hindered by low wages and inadequate training.
- Non-availability of instruments for child development: Height and weight measuring instruments in Anganwadi Centres (AWCs).
- More than 80% of Anganwadi centres in rural areas of the state lack proper sanitation facilities and access to clean drinking water, contributing to the prevalence of diseases that exacerbate malnutrition, such as diarrhoea and parasitic infections.
- Less than 50% of the total allocated funds for the Integrated Child Development Services (ICDS) were utilized in 2018-19, indicating underutilization of funds.
- **Lack of credible data on a year-to-year basis:** There was a 10-year gap between NFHS 3 and NFHS 4 surveys.
- **Poverty and income inequality:** Malnutrition arises from the vicious cycle that starts with poverty. Low-income families have less access to resources to attain healthy meals, leading to insufficient nutrients in their diets, which subsequently leads to malnutrition.
- **Rice wheat-based policy:** India's food security policy gave excessive focus to rice and wheat for many decades.
- **Poor feeding practices:** Malnutrition among children can be attributed to poor feeding practices, which encompass various factors such as premature weaning, insufficient exclusive breastfeeding, and inadequate complementary feeding.
- **Climate change impact:** Erratic rainfall and increasing frequency of extreme events have impacted agricultural activities everywhere creating unfavourable conditions for food production.
- **Corruption:** Corruption in PDS is widely recognised. PDS a food distribution scheme is mired with inefficiencies and corrupt practices denying food to many. **Eg: NAN scam of Chhattisgarh.**

### GOVERNMENT INITIATIVE TO TACKLE MALNUTRITION

- **National Nutrition Strategy by Niti Aayog:** To reduce all forms of malnutrition by 2030, with a focus on the most vulnerable and critical age groups. The Strategy also aims to assist in achieving the targets

identified as part of the Sustainable Development Goals related to nutrition and health.

- **Integrated Child Development Services (ICDS) Scheme:** To improve the nutritional and health status of children in the age-group 0-6 years;
- **Prime Minister's Overarching Scheme for Holistic Nutrition Abhiyaan (POSHAN Abhiyaan 2.0):** To strengthen nutritional content, delivery, outreach and outcomes with focus on developing practices that nurture health, wellness and immunity to disease and malnutrition
- **Mid-Day Meal Scheme:** It provides that every child aged six to fourteen years, attending classes I to VIII, shall receive a free, hot cooked meal every day except on school holidays.
- **National Food Security Act (NFSA):** This act aims to provide subsidized food grains to a majority of the population, including children, to ensure access to adequate food.

### SUGGESTIVE MEASURES TO TACKLE MALNUTRITION

- **Need to invest in the infrastructure of ICDS and the Anganwadi centres** as well as improve their coverage.
- **Promoting breastfeeding:** Emphasizing exclusive breastfeeding for the first six months and sustained breastfeeding up to two years enhances the nutritional well-being of infants and young children.
- **Enhancing dietary diversity:** Encouraging a balanced and diverse diet incorporating fruits, vegetables, whole grains, legumes, nuts, and animal-source foods helps address nutrient deficiencies. **For example:** Haryana is providing financial incentives of ₹7,000 per acre to farmers for shifting from paddy to pulses, oilseeds, and cotton.
- **Need to implement Buddy Mothers Model, the mother of a healthy baby guides the mother of a malnourished child at an Anganwadi centre every week** in the all over India so that children can enjoy their right to stay healthy.
- **Social audit of Mid-day meal scheme:** The mid-day meal scheme should undergo a social audit in every district by the states and union territories.
- **Establishing an Agriculture-Nutrition Corridor:** Can be pivotal in addressing India's nutritional challenges, particularly in its undernourished villages. This initiative aims to develop mechanisms to ensure the nutritional security of villages.

- **Cash transfers:** Especially in regions experiencing acute distress, where household purchasing power is very depressed. It can also be used to incentivise behavioural change in terms of seeking greater institutional support.

#### **UTTAR PRADESH MODEL TO TACKLE MALNUTRITION: TAKE HOME RATION MODEL**

- Collaboration between United Nations World Food Programme (WFP) and the Department of Women and Child Development aims to boost the nutritional value and utilization of supplementary nutrition in Uttar Pradesh's ICDS scheme. Focus on enriching take home ration products to promote diversity and increase consumption.
- Women's empowerment in tackling malnutrition by supporting community-based micro enterprises led by self-help groups. These enterprises produce fortified and nutritious foods for pregnant/breastfeeding mothers and children, provided as take home ration through the Integrated Child Development Services (ICDS) programme.
- Engaging women from the community to run the take home ration production units. They have been provided with machinery and raw materials such as wheat at subsidised rates to produce and distribute take home ration, this unique gender-transformative approach provides livelihood opportunities to local women, empowering them economically.
- The model involves the production of different variants for ICDS beneficiaries. This is done by a 20-member women group that uses automated equipment with a capacity of five metric tonnes per day.
- Once the rations are delivered to Anganwadi centres by the women's groups, the women are reimbursed according to ICDS cost norms.
- National Accreditation Board for Testing and Calibration Laboratories-accredited laboratories test the products before dispatch to Anganwadi centres to certify the requisite calorie and protein values and ensure food safety.

## **FOREIGN UNIVERSITY CAMPUSES IN INDIA**

#EDUCATION

PRIMARY  
SOURCE THE HINDU  
BUSINESS LINE

*Foreign universities looking to set up campuses in India are like a "new fruit" in the market and pose no threat to top-rung B-schools in India.*

#### **REGULATION ON SETTING UP FOREIGN UNIVERSITY CAMPUSES IN INDIA**

In line with NEP 2020, the University Grants Commission (UGC) regulates foreign universities to establish campuses in India. The guidelines of UGC:

- **Eligibility Criteria:** Two categories of Foreign Higher Education Institutions (FHEIs) are eligible to seek permission to open campuses in India: **Universities ranked among the top 500 globally (either overall or in specific subjects), and respected institutions from their home countries.**
- **Approval Procedure:** The UGC will establish a permanent committee to evaluate each application on its merits, considering factors such as the credibility of the educational institutions, the programs they intend to offer, their ability to enhance educational opportunities in India, and the proposed academic infrastructure.
- **Fee Structure:** The university will decide how **much to charge for tuition and other fees. The fee structure will be clear and fair.**
- **Faculty:** They will have the **freedom to hire faculty and staff from India and other countries, and decide the qualifications** for hiring faculty and staff.
- **National Interest:** FHEIs must not offer any program or course that jeopardizes India's national interest or higher education standards. The operations of FHEIs should align with India's sovereignty, integrity, and security, as well as promote good relations with other countries, uphold public order, decency, and morality.

#### **BENEFITS OF ESTABLISHING FOREIGN UNIVERSITY CAMPUSES IN INDIA**

- **Quality-upgradation:** Foreign university campuses often come with advanced teaching methodologies, **state-of-the-art infrastructure, and experienced faculty**, can lead to an overall improvement in the quality of education provided in India.
- **Development of internationally relevant curriculum:** Foreign universities typically offer programs that are aligned with global industry trends and standards, by establishing their campuses in India,

## SOCIETY AND SOCIAL JUSTICE

they can introduce courses and curriculum that are internationally recognized and relevant, thus better preparing students for **global careers and enhancing their employability**.

- **Reduce the need for foreign exchange:** The presence of campuses of foreign universities may ease the tendency to shift abroad for higher studies and will help reduce the need for foreign exchange. Currently, around 11.3 lakh Indian students are studying abroad, with estimated annual spending ranging between US\$ 13-30 billion every year. (Rajya Sabha: 2022)
- **Boosting Research:** Enrolment in M. Phil and PhD courses remains notably low in India, expected that campuses of FHEIs will improve enrolments in research courses and help improve the ecosystem in India.
- **Cultural Exchange:** Having foreign universities in India can foster cultural exchange and understanding between India and other countries and also would attract students from other countries to come to India for their higher education, thereby boosting the Indian economy.

### IMPACT MAY BE LIMITED DUE TO CHALLENGES LIKE

- **Affordability:** UGC regulations allow FHEIs to decide their fee structure which may primarily cater to wealthy and make education unaffordable for marginalised sections.
- **No-incentive for FHEIs:** In absence of government funding, FHEIs require huge investment on their part for setting and operating campuses, which may not incentivise them to set up campuses in India.
- **Quality:** UGC regulations include "reputed FHEIs" in their home country eligible to open campuses in India. However, home reputation without standard assessment is subjective criteria which can be manipulated, raising quality concerns.
- **Multiple global rankings:** Such as the QS, Times Higher Education, Financial Times Rankings etc., and the regulations have not elaborated which rankings shall be considered for eligibility criteria.
- **National security clause is too restrictive in nature:** Some of the terms like morality and decency are subjective based on cultural differences, may make foreign faculty reluctant to join Indian campuses.

### CHALLENGES TO INDIA'S HIGHER EDUCATION

- **Dilution of quality of education:** With foreign universities focused on making a profit, there is a fear that they would compromise on the quality of education to attract more students.
- **Lack of focus on the needs of the Indian Education:** With foreign universities focused on their interests, there is a fear that they would not consider the specific needs of the Indian higher education system, could lead to a mismatch between **the education provided by foreign universities and the needs of the Indian job market**.
- **No-Affirmative Actions:** Absence of any kind of affirmative action in FHEIs campuses in India will further reduce weaker sections' access to higher education, can further widen the educational disparity among students.
- **Not a level playing field:** FHEIs can operate as for-profit institutions and will be permitted to repatriate surplus funds abroad. In contrast, Indian public Higher Education Institutions (HEIs) are not for-profit entities and are required to reinvest any surplus funds. This distinction will place FHEIs on a different footing compared to Indian HEIs.

### WAY FORWARD

- **Higher Education Commission of India (HECI)** should establish standards and uniform guidelines for both Indian and Foreign HEIs to ensure quality education and regulatory coherence across the higher education sector.
- **International accreditation for Indian HEIs** would enhance their global reputation and competitiveness.
- **Offering scholarships to students from backward classes and marginalized sections** to study at Indian campuses of FHEIs would promote inclusivity and access to quality education.
- The government should establish **clear guidelines and regulations for accreditation of foreign universities in India**, can help ensure that these institutions operate in a way that is consistent with Indian laws and regulations.
- **Extending National Assessment and Accreditation Council's (NAAC) benchmark for assessing universities to FHEIs** would ensure that foreign institutions operating in India are held to the same standards of quality and excellence as Indian universities, would contribute to maintaining



consistency and fairness in evaluating educational institutions, thereby safeguarding the quality of education.

## **SURROGACY IN INDIA**

#WELFARE MECHANISM

PRIMARY  
SOURCE THE HINDU

*The Union government has modified Rule 7 the **Surrogacy (Regulation) Rules, 2022** and notified that both gametes need not come from a married couple in case they are certified as suffering from a medical condition.*

### **ABOUT SURROGACY**

- **Surrogacy (Regulation) Act, 2021** defines surrogacy as a practice where a woman gives birth to a child for an intending couple with the intention to hand over the child after the birth to the intending couple.
- Surrogacy can be classified into:
  - **Altruistic surrogacy** entails no financial compensation for the surrogate.
  - **Commercial surrogacy** involves paying the surrogate for bearing the child, implying a profit.
  - **Compensated surrogacy** simply involves covering the incurred expenses and loss of wages.
- In *Devika Biswas v. Union of India*, the Supreme Court held that Right to Reproduction was an essential facet of the 'Right to Life' under Article 21 of the Indian Constitution.

### **ABOUT SURROGACY (REGULATION) ACT, 2021**

- The Act prohibits **commercial surrogacy**, but allows **altruistic surrogacy**.
- The Act permits surrogacy when, an intending couples who suffer from proven infertility and an Indian woman who is a widow or divorcee between the age of 35 to 45 years and who intends to avail the surrogacy.
- Surrogacy clinics are prohibited from conducting surrogacy or any associated procedures unless they receive registration approval from the relevant authority.
- The **National Surrogacy Board (NSB) and State Surrogacy Boards (SSBs)** shall be established by both the central and state governments, respectively.
- For a surrogate mother **to be eligible for a certificate from the appropriate authority**, she must have a

familial relationship with the intending couple; not have served as a surrogate mother previously; possess a certificate confirming her medical and psychological health, be an ever-married woman having a child of her own, and be 25 to 35 years old.

- The surrogate mother is not allowed to use her own eggs for the surrogacy process.
- An order of parentage and custody of the surrogate child passed by a Magistrate's court.
- Insurance coverage for a period of 36 months covering postpartum delivery complications for surrogate.

### **ABOUT SURROGACY (REGULATION) RULES, 2022**

- As per the Surrogacy (Regulation) Act, 2021, the couple can have a child born through surrogacy but must have at least one gamete from the intending couple, thus restricted married couples from getting donor gametes.
- In case when the District Medical Board **certifies that either husband or wife constituting the intending couple suffers from medical condition** necessitating use of donor gamete, then surrogacy using donor gamete is allowed.
- While the relaxation is for **intending couple only**. If a divorced or widowed woman opts for surrogacy, the **egg has to come from the mother** and Single woman (widow or divorcee), undergoing surrogacy must use **self-eggs and donor sperms to avail surrogacy procedure**.

### **RATIONALE FOR THE MODIFIED RULE**

- **Surrogacy (Regulation) Rules, 2022**, which insisted on the **use of both eggs and sperm from the intending couple**, the surrogacy rules allowed the **use of donor eggs, but not sperm**.
- **The rules** was challenged in the Supreme Court by a woman with **Mayer-Rokitansky-Kuster-Hauser (MRKH) Syndrome**, a rare congenital disorder that affects the reproductive system and can cause infertility.
- The modifications in the Surrogacy Rules came after the Supreme Court doubted the correctness of the existing rules.
- **Also** the quality and number of eggs go down with age. While the decline accelerates after the age of 35 years, doctors recommend definitely using a donor egg after the age of 45 years.

**CHALLENGES IN SURROGACY (REGULATION) ACT, 2021**

- **Exclusionary:** The provisions deny this opportunity to LGBTQ+ persons, live-in couples, unmarried women and single parents.
- **Altruistic surrogacy is paternalistic** – It expects a woman to go through the physical and emotional tolls of surrogacy free of cost and only out of 'compassion'. Thus reinforcing age old patriarchal norm of no economic value to the women's work.
- **It doesn't respect the bodily autonomy of women** – By shifting from right based to need based approach it snatches away the right of a women to decide upon her reproductive choices. Further it is and violative of her fundamental rights under Articles 14 (right to equality) and 21 (right to life) of the Constitution.
- **Impetus to black marketing**- Blanket ban on commercial surrogacy may lead to creation of unregulated, exploitative underground/black markets.
- **Does not defines close relative** – The act didn't define 'close relative', which is a condition to be fulfilled by the surrogate mother. Thus scope for confusion and exploitation of loop holes is always there.
- **Reproductive liberty to the couples** – Several restriction in form of eligibility criteria etc restricts the surrogacy option to intending couple which is a denial of reproductive liberty to them.
- **No power to make decision on abortion** – Intending couple don't have final say in the consent to abort a surrogate child, even if the child being born out of a surrogacy arrangement is at the risk of physical or mental abnormalities.
- **Identity and emotional aspect** – Several times couples do not want to reveal their plans of opting for surrogacy, now putting the condition of close relative to be a surrogate clearly ignores this aspect and restricts the choices. Further, familial bonds and interaction may involve high emotional complications between surrogate mother and intended parents.
- **Definition of infertility:** Infertility is restricted to failure to conceive, does not cover other issues that a women may face in delivering a child.

**WAY FORWARD TO ADDRESS THE GAPS IN**

- The government should remove the time limit for IVF treatment before permitting surrogacy, taking into consideration medical circumstances and concerns that deter some women from childbirth.

- The government is should address postpartum depression by implementing provisions for its management, and maternal benefits should be accessible to all mothers.
- Government should provide clear definition of close relative and infertility.
- With appropriate safeguards, expanding the surrogacy sector to include commercial surrogacy will benefit individuals who long for the experience of parenthood.
- Government should include live-in couples, unmarried women, and single parents in this act, as Right to Reproduction is the fundamental rights.

## EQUAL OPPORTUNITY POLICY FOR TRANSGENDER PERSONS NOTIFIED BY CENTRAL GOVERNMENT

#VULNERABLE SECTIONS

PRIMARY  
SOURCE THE HINDU

*The primary objective of the policy is to create an atmosphere that ensures the fair treatment of transgender individuals, free from discrimination, harassment and bias, while establishing a robust grievance redressal mechanism.*

**SCOPE OF THE POLICY**

Applies to all employees of the central and state/UT government and their offices. The policy will act as a guiding document for business partners.

**PROVISIONS OF THE POLICY**

- Strictly prohibits discrimination based on gender identity or expression.
- Transgender employees to be addressed by the name and the gender of their choice in all workplace communication.
- Transgender individuals will be considered for employment based on their qualification and skills without prejudice.
- Strict prohibition on harassment or bullying based on gender identity. There should be prompt reporting and investigation of any such incident.

**SOCIETY AND SOCIAL JUSTICE**

- Information related to gender identity shall be confidential and no disclosing of such information without the explicit consent of the concerned individual.
- Infrastructure facilities such as unisex toilets and amenities like hygiene products to be provided for transgender persons.
- Conducting regular training to raise awareness about transgender issues like education on Transgender Persons (Protection of Rights) Act, 2019 and Transgender Persons(Protection of Rights) Rules, 2020.
- Appointment of Complaint Officer by the Head of Office for receiving complaints for investigation in all central and state government ministries and departments.
- Employees should be encouraged to report the incident to the Complaint Officer.
- Necessary action such as termination of job against any employee indulging in harassment or discrimination in contravention to the equal opportunity policy.
- Head of the Department will be overall responsible to oversee and promote the effective operation of this policy.

## EARLY CHILDHOOD CARE AND EDUCATION (ECCE)

#VULNERABLE SECTIONS #EDUCATION

PRIMARY SOURCE THE HINDU

### Early Childhood Education

Learn ▪ Play ▪ Grow

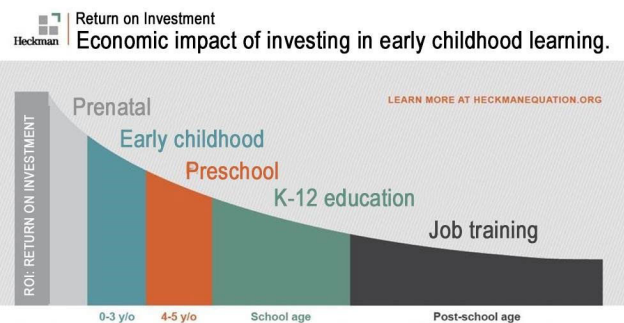


*It might seem self-evident that India's children deserve economic investment, given the country's focus on demographic dividend, education and jobs. But, somehow,*

*early childhood education has remained both under-invested and under-explored over decades.*

#### ABOUT

- **The initial six years of childhood** constitute the formative stage of early childhood. It includes early stimulation programmes through crèches/homes stimulation for 0-3 year olds, early childhood education (ECE) programmes for 3-6 year olds (as seen in anganwadis, balwadis, nurseries, preschools, kindergartens, preparatory schools, etc.).
- These years are the bridge years between home and school, **critical for physical, cognitive, socio-emotional, language, and early numeracy development** - components together comprising ECCE.
- These years have the "**most important influence in subsequent learning, behaviour and health.**"
- **As per Census 2011**, India, with a population of 121.1Cr, has 16.45Cr children in the age group 0-6 years which constitute 13.59% of the total population.



- At present, there are likely to be **about 10 million children between the ages of 3-6 years.**
- **The objective of SDG 4.2** is to guarantee that every girl and boy has equitable access to high-quality early childhood development, care, and pre-primary education, ensuring their preparedness for primary education by the year 2030.
- **The Heckman Curve** shows that the highest rate of economic returns comes from the earliest investments in children, providing an eye-opening understanding that society invests too much money in later development when it is often too late to provide great value. It shows the economic benefits of investing early and building skill upon skill to provide greater success to more children and greater productivity and reduce social spending for society.

**IMPORTANCE OF EARLY CHILDHOOD CARE AND EDUCATION (ECCE)**

- **Critical Age:** More than 85% of a child's brain development happens before age 6, underscoring the vital role of early care and brain stimulation for healthy growth and brain development.
- **Realisation of Potential:** When children are healthy and learning well in their early years, they are better able to reach their full developmental potential and participate effectively in economic, social, and civic life at adulthood.
- **Inclusive Development:** Providing ECCE is regarded as a means of promoting equity and social justice, inclusive economic growth and advancing sustainable development.
- **Foundation for Future Learning:** According to Neuroscience a child's early experiences can provide either a strong or a fragile foundation for later learning, development and behaviours.
- **High Rate of Return:** The larger economic returns on investment in prior-to-school programmes than in programmes for adolescents and adults has been demonstrated.
- **Decrease Dropout Rate:** Educational sciences have revealed that participation in early childhood care and education programmes boosts children's school readiness and reduces the gap between socially advantaged and disadvantaged children.
- **Foundational Skilling:** It promotes social skills, ethics, teamwork, aiming for optimal outcomes in physical, cognitive, socio-emotional, cultural, and communication domains.
- **Human Right Perspective:** Expanding quality early learning is an important means for realizing the right to education within a lifelong learning perspective.
- **Promote multilingualism:** Studies demonstrate that children effortlessly acquire languages from ages 2 to 8, highlighting the significant cognitive advantages of being multilingual for young learners.

**GOVERNMENT INITIATIVE OF EARLY CHILDHOOD CARE AND EDUCATION (ECCE)**

- **National Initiative for Proficiency in Reading with Understanding and Numeracy (NIPUN Bharat):** To create an enabling environment to ensure the universal acquisition of foundational literacy and numeracy, so that every child achieves the desired

learning competencies in reading, writing, and numeracy by the end of Grade 3, by 2026-27.

- **Vidya Pravesh:** Three-month Play-based School Preparation Module for Grade-I' is an attempt to promote their holistic development by providing age appropriate experiences for developing requisite competencies necessary for Grade-I. The module is an integral part of Nipun Bharat.
- **Integrated Child Development Services (ICDS) Scheme (1975):** Provides a range of service from health and nutrition to pre-school non formal education.
- **The Ministry of Education's Guidelines for Parent Participation in Home Learning :** A key strategy for early learning, that is to turn everyday routines into fun playful moments for learning and brain development.
- **National Curriculum Framework for Early Childhood Education (ECE) 2013:** To promote inclusive, equitable and contextualized opportunities for promoting optimal development and active learning capacity of all children below six years of age. It envisages improving pathways for a successful and smooth transition from care and education provided at home to centre.
- **National Education Policy 2020:** In the new 5+3+3+4 structure of New Education Policy 2020, a strong base of Early Childhood Care and Education (ECCE) from age 3 is included, which is aimed at promoting better overall learning, development, and well-being.
- **Poshan bhi, Padhai bhi ECCE policy:** Every child would be provided with at least two hours of high-quality pre-school instruction on a daily basis.

**CHALLENGES TO ECCE**

- **Policy fragmentation:** ECCE policies and services are fragmented and **do not leverage whole-of-government and whole-of-society approaches** to addressing the **holistic needs and rights of families and their young children.**
- **School readiness:** Annually, **nearly 25 million children are born in India, with about 99% enrolling in school by age 5 or 6.** Yet, the ASER 2019 report on 'Early Years' indicates a significant portion of these children are not adequately prepared for school. Specifically, only 10.7% of 5-year-olds can match pictures starting with the same sound, and just 17.5% are able to complete simple pictorial patterns.



## SOCIETY AND SOCIAL JUSTICE

- **Lack of public provision:** The presence of non-state actors like private schools, NGOs etc. in ECCE is more evident than public counterpart.
- **Quality of ECCE:** The NEP 2020 highlights that quality ECCE remains inaccessible to millions of young children, especially those from socio-economically disadvantaged backgrounds.
- **Parental/caregiver neglect:** There is a prevalent belief among parents and caregivers that the early years should be solely dedicated to play, underestimating the importance of educational engagement. NIPUN Bharat points out a significant barrier: parents or caregivers, particularly the illiterate, often believe their educational role is limited to sending their child to school, overlooking their potential influence on the child's early learning and development.
- **Insufficient regulation of the sector:** There is a lack of effective regulation, and it does not establish quality assurance mechanisms that focus on outcomes.
- **Chronic underfunding:** An average of 3% of the education budget, which is very little, is allocated to education in which the share of ECCE becomes minimal. Even in terms of international aid, pre-primary education remains the least funded sector.

### WAY FORWARD FOR ENHANCING ECCE IN INDIA

- **Expanding and diversifying access:** Increasing investment to expand ECCE services are essential steps. Innovative ECCE delivery mechanisms such as mobile kindergartens with teachers, equipment for learning and play.
- **Enhancing quality and relevance:** ECCE curriculum frameworks should cover different aspects of early learning and prepare children with essential knowledge, skills, and dispositions **with focusing on smooth transition to formal education.**
- **Making ECCE educators and caregivers a transforming force:** For the transformation of ECCE to take place, ECCE educators need to be adequately supported and empowered to play their part.
- **Improving governance and stakeholder participation:** Carving out a role for School governance and participation of society at large in the implementation of the ECCE framework.
- **Using funding to steer ECCE development:** Strengthening domestic public financing is important for providing affordable ECCE. Innovative financing may include earmarking resources from economic activities and other sources.
- **Monitoring and Assessment:** Availability and reliability of data obtained from assessments of ECCE framework will enable efficient and timely monitoring of programmes and child developmental milestones.
- **Multilingual education:** Turn multilingual classrooms into an asset by including children's local languages in early learning programs, as recommended by UNICEF-LLF. This approach supports equitable learning environments and facilitates stronger foundations in the school language and cognitive skills like thinking and reasoning.
- **Emphasis on multilingualism and the power of language:** The UNICEF-LLF "Guidelines for Implementation of Early Learning Programs" reiterates that **including children's languages in the classroom helps to promote an equitable learning environment.**
- **National caregiver helpline:** Establish a helpline for caregivers to receive guidance in their local language.
- **Galvanize international cooperation and solidarity:** Participation in the World Conference on Early Childhood Care and Education can be an opportunity to mobilize existing global, regional, and national networks to increase focus on identifying and sharing innovations, policies and practices.
- **Children with disabilities:** Ensure that ECCE programs are inclusive and provide equal opportunities for children with disabilities.

## ISSUES OF ASHA WOMEN

#SOCIAL JUSTICE #HEALTH

PRIMARY  
SOURCE THE HINDU

*In the recent Interim Budget, government announced free health insurance cover for all ASHAs and Anganwadi workers and helpers under Ayushman Bharat Scheme.*

### MITANIN PROGRAM: PIONEERING COMMUNITY HEALTHCARE IN CHHATTISGARH

- **Mitanin means** 'friends', a friendship between women, one with the promise of compassion.
- In 2002, *Mitanins* came to symbolise care, when Chhattisgarh designated women to play the role of



community health workers. They were advocates for resource-deficient communities, friendly faces of a distant health system, agents of both change & care work.

- *Mitanins* inspired ASHA framework three years later.

#### **CHALLENGES FACED BY ASHA WORKERS**

- **Logs in a triple shift:** Spread out between the **home, community and health centres**, often leading to insufficient rest, poor nutrition, and heightened risk of health issues such as anaemia and non-communicable diseases.
- **Case study:**
  - During COVID-19, a survey of 40 ASHA workers in Phanda block, Bhopal, day starts at dawn for many. Almost 30% of ASHAs said they do not have time to eat in the morning; and about 13% of ASHAs said they do not eat anything the whole day.
  - Almost half of the ASHAs surveyed in Phanda fall in the obese or overweight category; less than 3% are underweight.
- **Economic precarity:** ASHAs routinely incur out-of-pocket expenditures for the logistical costs of their job on photocopies, travel, mobile data recharge. ASHAs in Bhopal spent up to 63% of their income on logistical costs, which the department failed to reimburse. Also they are overworked and underpaid.
- **Triple burden:** Along an axis of power inequities, **where gender, caste, and informal economy intersect**. As women 'volunteers', and not designated health care workers, ASHAs experiences cut across layers of marginalisation.
- **Double burden of environmental challenge and occupational hazards:** They face increased vulnerability due to extreme weather conditions like heat waves, impacting their health and work efficiency. Despite their role, they lack formal recognition as 'workers,' excluding them from protections against occupational hazards.
- **Social precarity:** ASHAs face violence, harassment, and discrimination, with limited protection or recourse. They often come from marginalized communities, further exacerbating their challenges. Also limited education restricts their professional development, yet their role enhances their status and identity in the community.

- **Unrecognized as formal workers:** Impacting their rights and welfare.

#### **WAY FORWARD**

- The need for policy reforms to address their health risks and work conditions, including better work timing and protective gear, is crucial.
- Recognise them as a formal workers.
- A study published in PLOS Global Public Health highlights that women are 1.6 times more likely to use maternal services and have safer, institutional deliveries if they are assisted by ASHAs. The research emphasizes the need for ongoing, systematic support for the ASHA program to improve child and maternal health in India.

## **POPULATION GROWTH COMMITTEE**

#INDIAN SOCIETY #POPULATION #MAINS  
EXHAUSTIVE

PRIMARY  
SOURCE *The Indian  
EXPRESS*

*The Finance Minister promised a committee to study India's population growth to ensure that the nation is **on target to meet the Viksit Bharat goal by 2047.***

#### **INDIA'S CURRENT POPULATION DYNAMICS AND FURTHER CHALLENGES**

- The **steady decline in fertility rates** is leading to a scenario where two parents are now being replaced by two children and all segments of the society have begun to adopt family planning.
- **Currently**, 33 per cent of the population is aged 20-29, while 23 per cent of the population is aged 40-59. But in 2047, the proportion of the younger population will decrease, and the proportion of older working ages will increase, with each forming about 28 per cent of the population.
- **Dependency burden**, defined as the number of individuals ages 15-59 supporting children under 15 and older population above 60, will vary dramatically between states.
  - For example in 2021, in Bihar, 151 working-age adults supported 100 dependents, while in Tamil Nadu, 189 adults supported the same population; this will flip with the worker-to-dependent ratio

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**SOCIETY AND SOCIAL JUSTICE**

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changing to 201 in Bihar and 132 in Tamil Nadu by 2051.

- **As fertility declines, the burden of child care for women will drop.** An analysis of National Family Health Survey data shows that in 1993, an average woman spent about 14 years caring for children under age five.
- This number dropped to eight years in 2021, however, time freed up from childcare has not been utilised in increased participation in the workforce.

**WAY FORWARD**

- To ensure that this growing proportion of middle-aged workers can keep up with the changing demands of an increasingly technologically driven economy, **government must invest in continued skill upgradation and on-the-job training.**
- For expanding women's ability to participate in the job market may be to improve the availability of childcare, possibly through creative combinations of Anganwadi and the Mahatma Gandhi National Rural Employment Guarantee Scheme. MGNREGA works should include rotational provision of childcare under the supervision of a trained early childhood educator.
- A combination of rising numbers of elderly and a declining number of children to care for them means the government must increase the ability of this older population to be self-sustaining.
- A combination of policies will be needed, including rising retirement age, enhanced old age pension schemes, and increased ability to sell land or homes, assets in which most of the wealth of the Indian elderly resides.
- Lessons from China, as China implemented a strict one-child policy, bringing it to a demographic cliff. China has reached a point where the needs of its aging population have begun to drag down its economic growth. Relaxing the one-child limitation has been unsuccessful in increasing fertility.
- This suggests that India should refrain from a similar panicked reaction and let fertility decline continue at a natural pace.
- The future of elderly and children in India will depend on how productive workers are in states like Bihar, Uttar Pradesh, Madhya Pradesh, and Chhattisgarh. The newly formed 16th Finance Commission will have the

task of investing in workers in these states to ensure the well-being of all Indians in the future.

**CONCLUSION**

Addressing these difficult challenges needs input from various experts like population researchers, economists, social scientists, and government policy specialists. Creating a special committee to study the challenges brought about by changes in population alongside the 16th Finance Commission will help guide government spending decisions, leading to positive effects on priorities.

## ADDITION OF COMMUNITIES IN SCHEDULED TRIBE LIST

#SOCIAL JUSTICE

**PRIMARY  
SOURCE** THE HINDU

*The Rajya Sabha on passed the Upper House cleared the Constitution (Scheduled Tribes) Order (Amendment) Bill, 2024, and the Constitution (Scheduled Castes and Scheduled Tribes) Order (Amendment) Bill, 2024, which seek to modify the list of Scheduled Castes and Scheduled Tribes in Odisha and Andhra Pradesh.*

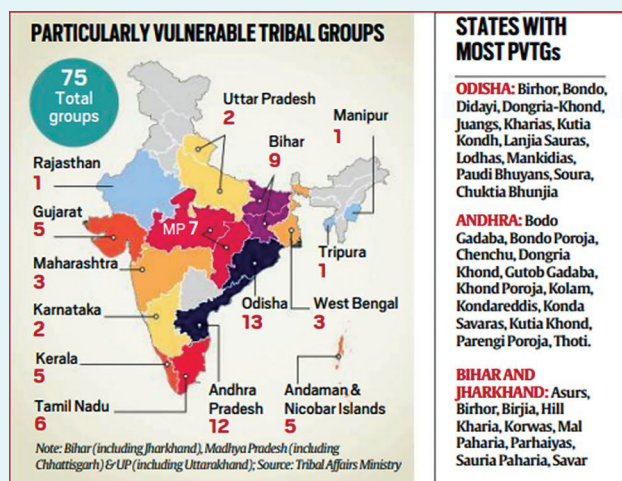
### **ABOUT CONSTITUTION (SCHEDULED TRIBES) ORDER (AMENDMENT) BILL, 2024 AND THE CONSTITUTION (SCHEDULED CASTES AND SCHEDULED TRIBES) ORDER (AMENDMENT) BILL, 2024**

- The first Bill seeks to modify the SC/ST list in Andhra Pradesh, while the second seeks to modify the SC/ST list in Odisha.
- Notable among the additions were **seven Particularly Vulnerable Tribal Groups (PVTGs), a subset of STs, three in Andhra Pradesh and four in Odisha**, whose independent names had been specifically added as synonyms or sub-tribes of communities already on the ST lists of these States.
- In Odisha, PVTG communities added are **Pauri Bhuyan and Paudi Bhuyan as synonyms of the Bhuyan tribe; the Chuktia Bhunjia as a synonym of the Bhunjia tribe;** the Bondo as a sub-tribe of the Bondo Poraja tribe; and the Mankidia as a synonym for the Mankirdia tribe.

## SOCIETY AND SOCIAL JUSTICE

- In Andhra Pradesh, PVTG communities included were Bondo Porja and Khond Porja as synonyms of Porja tribe and Konda Savaras as a synonym for Savaras tribe.
- In addition to this, the Bill to amend Odisha's ST list also shifted two entries - Tamadia and Tamudia - from **Scheduled Castes list to the Scheduled Tribes list.**

### ABOUT PARTICULARLY VULNERABLE TRIBAL GROUPS (PVTGs)



- It is a classification used in India to identify certain tribes or communities that are considered to be at a particularly high risk of extinction or facing extreme socio-economic marginalization

- Tribal communities are often identified by some specific signs such as primitive traits, distinctive culture, geographical isolation, shyness to contact with the community at large and backwardness.
- In 1973, the **Dhebar Commission created Primitive Tribal Groups (PTGs)** as a separate category, which are less developed among the tribal groups.
- In 2006, the Government of India renamed the **PTGs as Particularly Vulnerable Tribal Groups (PVTGs).**
- **Criteria for identification of PVTGs :**
  - Pre-agricultural level of technology
  - Low level of literacy
  - Economic backwardness
  - A declining or stagnant population accordingly.
- India has **ST population of 10.45 crore as per 2011 census, out of which 75 communities located in 18 States** and the Union Territory of Andaman and Nicobar Islands have been categorized as PVTGs.
- Among the 75 listed PVTGs the highest number are found in Odisha (13), followed by Andhra Pradesh including Telangana (12).
- The largest PVTG is **Seharia Community of Rajasthan.**

## PRELIMS SNIPPETS

### MINISTRY OF EDUCATION – AICTE INVESTOR NETWORK

Union Minister for Education and Skill Development & Entrepreneurship launched 'Ministry of Education – AICTE Investor Network' which will bring students, faculty, investors and the market on one platform. This initiative is another concrete step towards catalysing the start-up landscape.

#### ABOUT AICTE INVESTOR NETWORK

- It is launched with the objective of **empowering educational institutions** to become innovation hubs, fostering a conducive environment for start-up

development, facilitating entrepreneurship by transforming innovative ideas into scalable and sustainable businesses and **providing start-ups with essential resources, mentorship, seed capital, and potential investors.**

- Jointly established by AICTE & Ministry of Education's Innovation Cell (MIC).

#### BENEFITS OF MOE-AICTE INVESTOR NETWORK

- Promote the culture of innovation in educational institutions
- Address the issue of start-up funding
- Facilitate opportunities for investors to support innovative ideas with higher educational institutions.

## SOCIETY AND SOCIAL JUSTICE

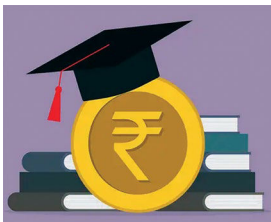
- encourage private investment in student- and faculty-led startups
- bridge the gap between investors and transformative educational initiatives, fostering collaboration for the advancement of education and technology.

### EDCIL VIDYANJALI SCHOLARSHIP PROGRAMME

*Union Minister of Education and Skill Development & Entrepreneurship, launched the EdCIL Vidyajali Scholarship Programme.*

#### ABOUT EDCIL VIDYANJALI SCHOLARSHIP PROGRAMME

- **Aim:** To ensure access to high-quality learning systems by facilitating a seamless **transition from secondary to higher education** and extending **financial support** for the **meritorious Navodaya Vidyalaya students who lack means**.
- **Beneficiaries:** In its initial phase will be students of **grades XI and XII studying in Navodaya Vidyalayas across the country**.
- **Key features of the programme:**
  - The programme, **in alignment with the National Education Policy 2020**, is a powerful force aimed at revolutionizing opportunities for quality education and access to higher education institutions.
  - It intends to **garner assistance and funding from non-government partners** and private sources such as CSR grants, national and international donors, and impact investors.
  - **Five significant MoUs were exchanged between CSR sponsors/impact founders** including Fiat India, HDFC Bank Limited, ClearMedi Healthcare, Bharat Forge, and Bill & Melinda Gates Foundation showcasing the collaboration between the government and private sector towards a shared



vision of nation-building and empowering the future workforce of this country.

- The online **Vidyajali Fintech Platform has been specifically curated** and the sponsorship will be disbursed to students through this platform as Direct Benefit Transfer (DBT).
- This platform will be **instrumental in capturing data, receiving, hosting, and viewing student applications, tracking student progress**, tracking grant disbursement, monitoring fund utilisation, generating impact reports towards SDG realisation, individual mentions of notable student achievement, and publicly acknowledging the support of the funders, among other platform utilities.
- **Significance of the programme:** It will strengthen the Government's efforts in fostering educational inclusivity and socio-economic upliftment in the country.
  - It symbolises a **whole-of-society approach** to empowerment through access to and opportunities for education, particularly for students belonging to economically disadvantaged sections.

#### ABOUT EDUCATIONAL CONSULTANTS INDIA LIMITED (EdCIL)

- It is the **only Public Sector Undertaking under the Ministry of Education**. It was incorporated under the Companies Act, 1956.
- It is a **Miniratna-I category company**.
- It offers **management and consultancy services in all areas of education and human resource development, both within India and overseas**.
- EdCIL has been primarily working in the **domain of online assessment, educational infrastructure and procurement, digital education, and preparation of Detailed Project Report (DPR) for educational institutions**.
- It has laid down blueprints for majority of eminent engineering and management institutions of India namely IITs, IIMs, and IISERs.



# COMMUNITY RADIO STATIONS

#WELFARE MECHANISM

PRIMARY  
SOURCE

THE HINDU

Minister of Information and Broadcasting released the revised policy on guidelines for setting up **Community Radio Stations (CRS)**, during the Regional Community Radio Sammelan (South), marks 20 years of Community Radio in India.



## ABOUT COMMUNITY RADIO STATIONS (CRS)

- Community Radio is an important **third tier in Radio Broadcasting**, distinct from Public Service Radio broadcasting and Commercial Radio.
- It is a **low power Radio Stations**, which are meant to be set-up and operated by local communities.
- It is regulated by the **Minister of Information and Broadcasting**.
- In **December 2002**, the Government approved a policy for the grant of license, for setting up of Community Radio Stations, to well established educational institutions.
- India's first Community Radio** was inaugurated in the year 2004 at the Anna University campus. Currently, there are **481 CRSs in India**.

## POLICY GUIDELINES FOR THE CRS IN INDIA

- It should be explicitly a '**not-for-profit**' organisation and should have a proven record of at **least three years of service to the local community**;
- The CRS, to be operated by it, should be designed to serve the local community in its coverage area;
- It must be a **Legal Entity** i.e. it should be registered under any such act relevant to the purpose;

- Organisations shall be eligible to apply for Community Radio licences:** State Agriculture Universities (SAUs), Indian Council of Agricultural Research (ICAR) institutions, Krishi Vigyan Kendras, Autonomous Bodies, Civil Society Organisations, Voluntary Organisations, Registered Societies, Public Charitable Trusts, not-for-profit organizations set up by Self Help Groups (SHGs) and not-for-profit Farmer Producer Organizations (FPOs) and educational Institutions including IITs/IIMs .
- Not eligible to apply for Community Radio licences:** Individuals; political parties and their affiliate organisations; organisations operating with a motive to earn profit; organisations expressly banned by the Union and State Governments; and religious bodies.
- An eligible organisation/ institution that **operates in multiple districts shall be allowed to set up a maximum of six (6) CRS** in different districts of operation, provided it fulfils certain conditions laid by the Ministry.
- The initial time period for the Grant of Permission Agreement (GOPA) **increased to ten (10) years**.
- Advertising time for CRSs is increased from 7 minutes per hour to 12 minutes per hour.
- Rate of Advertisement has been increased from Rs. 52 per 10 sec to Rs. 74 per 10 sec for Community Radio Stations.
- At least **50% of content shall be generated with the participation of the local community**, out of which at least half of the content should be focussed on women empowerment and the themes should go beyond nutrition, breastfeeding, pregnancy, recipes and beauty.
- Programmes should preferably be in the **local language and dialect(s)**.
- CRS shall be expected to cover a range of 5-10 km.
- Applicants will be eligible to seek funding from **multilateral aid agencies**. Applicants seeking foreign funds for setting up the CRS will have to **obtain FCRA clearance under Foreign Contribution Regulation Act, 1976**.

## SIGNIFICANCE OF CRS

- The Community Radio provides a platform to communities to **air local voices on issues concerning Health, Nutrition, Education, Agriculture etc.**, that makes CRS an ideal tool for community empowerment.



- Community Radio broadcast is in local languages and dialects, people are able to relate to it instantly, and has the **potential to strengthen people's participation in development programmes**.
- It is also a **repository of local folk music and cultural heritage**. Many CRSs record and preserve local songs for posterity and give local artists a **platform to showcase their talent to the community**.

## NATIONAL CREDIT FRAMEWORK

#EDUCATION #PRELIMS NUGGETS

PRIMARY SOURCE THE HINDU

*The principals of schools affiliated to the Central Board of Secondary Education (CBSE) have been asked to start the planning for introducing the pattern for allocating credits to students for subjects, in line with National Credit Framework, 2022. The Board has also proposed guidelines open for feedback from its affiliated schools.*

### WHAT IS THE CREDIT SYSTEM?

- **'Creditisation' aims to establish academic equivalence between vocational and general education, facilitating mobility between the two education systems**, as proposed by the **National Education Policy, 2020**.
- The University Grants Commission (regulator of higher education in India), came with the **National Credit Framework (NCrF) in 2022**.
- **NCrF is a unified credit framework for the integration of training and skill development** into schools and higher education.
- For a student in Class 9 to advance to Class 10, they will need to earn a specified number of credits.

Eventually, the **student will earn enough credits to be eligible to enrol in an undergraduate programme** in a university.

To implement this in its affiliated schools, the **CBSE formed a subcommittee in 2022** that suggested how the current academic framework should be **redesigned to align it with NCrF**.

### SAMPLE FRAMEWORK BY THE CBSE

- The board will be notifying a **new set of credit framework for schools next year from Class nine to twelve**.

- The board has asked its schools to start implementing **a sample credit framework at least for Class Nine and Class Eleven**.

### Existing regulations:

- A student has to pass in **5 subjects** (two languages and three main subjects: maths, science and social science) to pass.
- Approximately **1050 hours are allotted to five compulsory subjects**.
- In order to aid teachers implement the credit framework, **an additional 150 hours has been allotted for internal assessment of subjects** like Physical Education and Health, Art Education, a skill-related subject, and a third language.
- Presently, a Class nine student passing with five compulsory subjects and completing internal assessment of remaining mentioned subjects **will earn at least 40 credits**.
- Under this, if the student opts for a sixth or seventh subject, and passes the five compulsory subjects, **extra credits totalling up to 54 can be earned**.
- Credits can be earmarked for project work, peer-learning, self-study, field trips, activities.
- Credits shall be reflected in the marks statement along with pre-defined grades.
- **Credits can only be earned in full or nil, i.e., a student can earn full credits upon passing a subject after assessment or will receive nil credit for not passing a subject**.
- Also, the allocation of credits for different subjects in class 11 will vary across currently five compulsory subjects, which will be converted into six compulsory subjects.
- From 2024-2025, when the new curriculum according to the National Curriculum Framework will come into force, **Students in Class nine and ten will have to study 10 subjects compulsorily**.
- Additional subjects will include a **compulsory inclusion of a 3rd language and of the three languages, two will be native to India. For instance, students can choose a combination of Hindi, Sanskrit and English**.
- One subject each for interdisciplinary areas, physical education and health, art education and a skill-related subject.

- Students' credits will be stored in their '**Academic Bank of Credit**' in the students' digilockers. There is also planning by the **Ministry of Education to come up with a system to reconcile credits in case the student moves abroad for higher education.**

**NATIONAL EDUCATION POLICY, 2020, SUGGESTED ACADEMIC BANK OF CREDITS (ABC) SCHEME. THE UNIVERSITY GRANTS COMMISSION HAS RECENTLY NOTIFIED THE SCHEME**

- *Academic Bank of Credits (ABC) is a virtual/digital storehouse that contains the information of the credits earned by individual students throughout their academic journey.*
- Academic Bank of Credits shall provide to every student the facility to open a unique or individual Academic Bank Account in digital form.
- When a student pursues any course and clears exams, credits will be automatically awarded to them.
- Institutions need to fill out the details and upload the deposits in the students' Academic Credit Bank's account on the digital portal.
- ABC will allow students of undergraduate and postgraduate degree courses to exit the course and enter within a stipulated period.
- The student can earn up to 50 per cent credits from outside the college/university where she/he is enrolled for the degree/diploma programme.

- The idea behind introduction of credits from the school-level is to reconcile with higher education systems (Under Graduation, Post-Graduation and Diplomas) for assessment and equivalence purposes.

**HOW WILL EXAMS BE CONDUCTED UNDER THE PROPOSED SYSTEM?**

- The credits earned **will be independent of the mark students obtain in exams.**
- **For Class 10 students:**
  - CBSE will conduct external (board) exams for the *three languages, mathematics and computational*

*thinking, social science, science and environmental education.*

- Art education, physical education and vocational education would be a mix of internal and Board examination.
- But students would have to pass all 10 subjects to move on to the next grade.

● **In Class 12:**

- All subjects will be **categorised into four groups.**
- The languages group is categorised as **Group 1.**
- **Group 2** would consist of subjects of arts education (like dance, music, sculpting), physical education, and vocational education.
- **Group 3** will have social science subjects (eg: history, geography, political science, economics etc) and interdisciplinary areas (such as environmental education and commerce).
- **Group 4** has subjects of mathematics and computational thinking and science.
- **Class 12 students will have to choose at least two languages from Group 1,** and four main subjects (with an optional fifth subject) from at least two of the remaining groups.
- There will be an external exam for both languages and Groups 3 and 4 subjects.
- If a student chooses to study a subject from Group 2, he/she will be assessed based on a mix of internal and Board exams.

**EXISTING GRADING SYSTEM**

- In all CBSE-affiliated schools, students are graded based on the marks obtained in the examination. **The credit system recommended will not change this.**
- For each subject, **students will be graded from A1, A2 up to D and E as per usual.**
- For awarding grades, **the Board will put all students in a rank order and award grades.**
- The top one-eighth of the candidates who passed the exam, for example, will receive an A1 grade, the next one-eighth will receive an A2 grade, and so on.

## PRACTICE QUESTIONS

### MCQS

**Q1. Consider the following statements about Particularly Vulnerable Tribal Groups (PVTGs) in India:**

1. A Cultural defacement of tribals is one of the criteria for determining PVTG status.
2. PVTGs reside in all states and one Union Territory.
3. The highest number are found in Odisha.
4. The Bhunjia tribe and the Mankirdia tribe are among the PVTGs of Odisha.

How many of the statements given above is/are correct?

- (a) Only one (b) Only two  
(c) Only three (d) All four

**Q2. Consider the following statements:**

1. The Surrogacy (Regulation) Act, 2021 prohibits commercial surrogacy in India.
2. The Surrogacy (Regulation) Act of 2021 allows Indian women who are widows or divorced and are between 35 to 45 years old to use surrogacy if they want to.

Which of the statements given above is/ are correct?

- (a) 1 only (b) 2 only  
(c) Both 1 and 2 (d) Neither 1 nor 2

**Q3. With reference to the Community Radio Stations (CRS), consider the following statements:**

1. It is regulated by the Ministry of Rural Development.
2. India's first Community Radio was inaugurated in the year 2004,
3. Political parties are not eligible to apply for Community Radio license.

How many of the above statements is/ are correct?

- (a) Only one (b) Only two  
(c) Only three (d) All four

**Q4. With reference to the EdCIL Vidyanjali Scholarship Programme, consider the following statements:**

1. It ensure access to high-quality learning systems by facilitating a seamless transition from secondary to higher education.
2. The Vidyanjali Fintech Platform is designed to directly disburse sponsorship funds to students via Direct Benefit Transfer (DBT).

Which of the statements given above is/ are correct?

- (a) 1 only (b) 2 only  
(c) Both 1 and 2 (d) Neither 1 nor 2

### DESCRIPTIVE QUESTIONS

- Q1.** What are the primary causes of malnutrition in India and suggest some strategies to prevent malnutrition and improve nutrition in India.
- Q2.** Critically analyze the implications of the Surrogacy (Regulation) Act, 2021, and explain the Supreme Court's 2023 amendments regarding donor gametes on women's rights to parenthood in India.

**Answers:** 1-c, 2-c, 3-b, 4-cs

# GEOGRAPHY, ENVIRONMENT, BIODIVERSITY & DISASTER MANAGEMENT

# GS PAPER (PRELIMS) AND GS PAPER I & III (MAIN)

## INDIA'S CLEAN ENERGY TRANSITION

#CLEANENERGY

PRIMARY  
SOURCE

THE HINDU  
BUSINESS LINE

SECONDARY  
SOURCE

NITI Aayog

India's focus on energy security and clean energy transition in the recent budget.

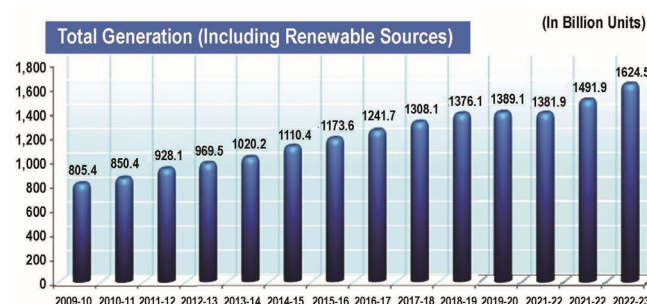
### WHAT IS THE PRESENT STATUS OF INDIA'S ENERGY SECTOR?

- Fossil and non-fossil contribution:
- Installed Generation Capacity (Fuel wise) as on 31.12.2023:

Category		Installed Generation Capacity (MW)	% Share in Total
Fossil Fuel	Coal	2,07,776	48.5%
	Lignite	6,620	1.5%
	Gas	25,038	5.8%
	Diesel	589	0.1%
	Total Fossil Fuel	2,40,023	56.0%
Non- Fossil Fuel	RES (Ind. Hydro)	1,80,796	42.2%
	Hydro	46,910	11.0%
			31.3%

Wind, Solar & Other RE	1,33,886	10.4%
Wind	44,736	17.1%
Solar	73,318	2.4%
BM Power/Cogen.	10,262	0.1%
wane to Energy	583	1.2%
Small Hydro Power	4,987	
Nuclear	7,480	1.7%
Total Non-Fossil Fuel	1,88,276	44.0%

- Total generation including renewable sources (trends)



- India's energy demand will continue to provide fuel for future economic growth and is bound to grow exponentially in the coming years.
- At present the country is world's 3rd largest consumer of oil, 3rd largest LPG consumer, 4th largest LNG importer, 4th largest refiner, 4th largest automobile market.
- India is likely to account for 25% of global energy demand growth over the next two decades.

**GEOGRAPHY, ENVIRONMENT, BIODIVERSITY & DISASTER MANAGEMENT**

- India's final energy demand is expected to double to about 1,200 Mtoe (millions tonne of oil equivalent) by 2070.
- The report titled 'India's energy-transition pathway: A net-zero perspective by FICCI and Deloitte India', has projected that the country requires a massive \$15 trillion in investments to achieve its net-zero emissions target by 2070.

**ISSUES IN INDIA'S ENERGY SECTOR**

- **Uneven Distribution of Energy Resources** which further lead to regional disparities in energy availability and consumption.
- **Over Dependency on Fossil Fuels** as still India's more than 50% of electricity generation comes only from fossil fuels.
- **Renewable Energy Integration** into the grid poses challenges due to their intermittent nature.
- **Energy Access** is also an issue in remote and rural areas having rugged terrain & topography.
- **Financial Health of DISCOMs** in India is also not good as they are facing financial stress, leading to issues in maintaining and upgrading the electricity distribution infrastructure.
- **Global and Geopolitical Factors** such as fluctuating oil prices and geopolitical tensions, can impact India's energy security and prices. This becomes significant in the backdrop of the fact that India meets close to 88% of its crude oil requirements through imports.
- **Sustainability:** Balancing economic development with environmental sustainability is a critical challenge

This is one of the reasons why India has been focusing on energy transition. In fact, in last year's Budget (2023-24) government had provided for ₹35,000 crore for priority capital investments towards energy transition and net zero objectives, and energy security.

**RECENT BUDGET ANNOUNCEMENTS IN THIS REGARD**

- **Commitment to meet net zero by 2070** — viability gap funding for wind energy (offshore); setting up of coal gasification and liquefaction capacity, phased mandatory blending of CNG, PNG and compressed biogas; and financial assistance for procurement of biomass aggregation machinery.
- **Rooftop solarisation** — one crore households will be enabled to obtain up to 300 units of free electricity.

- **Adoption of e-buses** for public transport, and strengthening the e-vehicle ecosystem.
- A new scheme of **bio-manufacturing and bio-foundation**.

**CHALLENGES IN INDIA'S CLEAN ENERGY TRANSITION**

- **Intermittency and Grid Integration:** The integration of intermittent renewable energy sources like solar and wind into the grid poses challenges in balancing supply and demand, as these sources depend on weather conditions.
- **Land Acquisition:** Securing suitable land for renewable energy projects, especially large-scale solar and wind farms, is a challenge especially in densely populated regions. This can also impact the land use.
- **Financial Viability and Investment:** The high upfront costs of renewable energy projects, coupled with financial constraints, can hinder the rapid deployment of clean energy technologies.
- **Energy Storage Technologies:** Efficient and cost-effective energy storage technologies are crucial for storing excess energy generated during peak times and supplying it during periods of low renewable energy production. Developing and implementing such technologies at scale is a challenge.
- **Logistics:** For e.g. India's waste collection is highly informal which becomes a huge challenge in the way of biogas generation. Preliminary processes like collection, transportation, and segregation limit its adaptation.
- **Lack of support from Discoms:** For e.g. Discoms have been reluctant to aid rooftop solar installations as they fear a loss of revenue with consumers moving to another energy source.
- **Geopolitical factors:** Supply chain disruptions in critical minerals can affect the renewable and EV revolution.

**WHAT CAN BE A WAY AHEAD IN THIS REGARD?**

- **Regional approach** should be followed. For ex. In North India has a huge scope of biogas, western Indian has scope of solar energy. Similarly coastal states and Ladakh region has huge wind potential.
- **Domestic manufacturing** of critical components is necessary to reduce import dependence.
- **Energy efficient storage systems** should be built to manage the issue of intermittency. India can leverage innovation in lithium-ion batteries and battery recycling



technology to enhance energy storage capabilities and optimize renewable energy utilization.

- **Recycling & repurposing:** Along with battery recycling, India has begun repurposing used batteries into sustainable 2nd-life Battery Energy Storage Systems (BESS), saving 98% of GHGe compared to making new batteries.
- Experts also feel that a **separate body can be built on lines of GST council** with States as members to ensure uniformity in terms of regulations and policies.
- **Financing:** Nationalised banks should offer easy financing options with affordable interest rates, for e.g. under the PM Suryodaya Yojana, facilitating broader access to capital for installation.
- **Role of Discoms:** Discoms should conduct extensive awareness campaigns and technical workshops to educate potential beneficiaries and also streamline the process of providing solar and net meters to reduce installation time and expedite project completion.
- **Bilateral negotiations** are necessary to ensure supply of critical minerals. E.g. Indo-Australia critical mineral investment partnership.

#### STEPS ALREADY TAKEN BY GOVERNMENT OF INDIA

To achieve its target of 500 GW in renewable power capacity by 2030, India has implemented various measures:

- Waiver of transmission system charges for inter-state solar and wind power sales,
- Establishing renewable power purchase obligations, and creating Ultra Mega Renewable Energy Parks
- Support to domestic manufacturing through Production-Linked Incentive (PLI) schemes.
- Setting up of innovative green energy trading platforms such as the GTAM (Green Term Ahead Market) and GDAM (Green Day Ahead Market). These platforms enable renewable energy developers to sell power on the open market without signing long-term Power Purchase Agreements.

## ROOFTOP SOLAR PLANT; PM SURYODAYA YOJNA

#RENEWABLE ENERGY

PRIMARY  
SOURCE

The Hindu  
Business Line

SECONDARY  
SOURCE

DownToEarth

*The Prime Minister has announced 'Pradhan Mantri Suryodaya Yojana' under which 1 crore households will get rooftop solar. Also in the Interim budget 2024, Finance Minister Nirmala Sitharaman said that the government will enable 1 crore households to obtain up to 300 units of free electricity every month through the rooftop solar programme.*

#### WHAT IS ROOFTOP SOLAR POWER?

- Solar photovoltaic (PV) panels can be placed on the top of building roofs to generate electricity. Such a system is called a rooftop solar system. Electricity generated from the rooftop solar system can be used to meet the buildings' energy demand, charge batteries for later use, or can be exported to the electricity grid.



More than 75 per cent of RTS installations are commercial and industrial (C&I) segment, according to the ministry data. Among the other segments are residential and public places.

The RTS numbers in most states are dismal, according to a recent report by the MNRE. Even urbanised, high-income Delhi, which had been allocated subsidised RTS for a capacity of about 30 MW, achieved only 20% of the target.

India currently has about 11 GW of installed rooftop solar capacity, of which only 2.7 GW are in residential units and the rest in commercial or industrial spaces. The government aspired to a target of installing 40GW

#### WHAT ARE THE ASSOCIATED ADVANTAGES?

- It can increase the **energy accessibility as well as inclusivity** due to its decentralized nature. 13% Indian

**GEOGRAPHY, ENVIRONMENT, BIODIVERSITY & DISASTER MANAGEMENT**

households are either using non-grid sources for power or "do not use any electricity at all." SRT systems could be game changers for these households.

- They help **minimise transmission and distribution losses**, as the generated power is consumed locally.
- They provide **environmentally friendly**, inexpensive back-up supply of power, a big advantage, given the persistent supply interruptions in most places.
- **No additional space required for installation**: biggest advantage of rooftop solar panels is that they can be installed on any type of roof. So, people don't need to vacate a land or invest in buying additional land.

**WHAT ARE THE ASSOCIATED CHALLENGES?**

- **High upfront costs**: A 30% capital subsidy support from government does cover a portion of this cost. However, most prospective customers either do not have the savings to cover the upfront costs, or are simply unwilling to invest, given the relatively large amount.
- **Specialization & Customization**: In addition, residential RTS are highly specialised and quality-dependent, and many customers want their own customisations, which may incur an additional cost.
- **Limited rooftop areas**: Especially in the Urban areas. Rural areas show higher technical potential based on residential rooftop area (363 GW) compared to urban areas across states (274 GW).
- **Low energy consumption**: A significant decline in technical is witnessed in states such as Assam, Bihar, Odisha, Madhya Pradesh, Rajasthan, Jharkhand, and Uttarakhand due to the high share of households with low energy consumption per sq. ft.
- **Competition from alternative**: existing subsidies for coal-fired electricity for e.g. make it cheaper than solar power.
- **Cumbersome load extension process**: In many cases, consumers find their electricity usage is lower than their rooftop solar system's capacity, requiring load adjustment. However, this process, particularly with local utilities or discoms, is often cumbersome.
- **Limited support from Discoms**: Discoms have been reluctant to aid rooftop solar installations as they fear a loss of revenue with consumers moving to another energy source.

**WHAT IS NET METERING?**

Net metering In the case of grid-connected electricity consumers using rooftop solar systems, "net metering" is a mechanism that allow them to first consume the electricity generated from the rooftop system and then export surplus energy, if any, into the grid. Thus, the intake of electricity from the grid reduces. At the time of electricity bill generation, the consumers are billed only for the net electricity they have consumed i.e., the difference between the electricity they have consumed from the grid and the surplus electricity they have exported to the grid (from the rooftop solar system).

**WHAT CAN BE A WAY AHEAD?**

- **Timely implementation & penalty clauses**: Establishing fixed timelines for installation tasks and implementing penalty clauses for delays can incentivise prompt action by power distribution company (discom) officials, ensuring efficient project execution.
- **Manufacturing ramp-up**: To meet the ambitious target of 30 GW capacity addition, there is a pressing need to ramp up domestic manufacturing facilities for solar cells and modules. This would reduce dependence on imports and drive down installation costs.
- **Awareness campaigns and workshops**: Discoms should conduct extensive awareness campaigns and technical workshops to educate potential beneficiaries about the benefits of rooftop solar installations and the available support schemes.
- **Accessible financing**: Nationalised banks should offer easy financing options with affordable interest rates for rooftop solar projects under the PM Suryodaya Yojana, facilitating broader access to capital for installation.
- **Provision of metres**: Discoms should streamline the process of providing solar and net meters to reduce installation time and expedite project completion.

## HUMAN-WILDLIFE CONFLICT

#ENVIRONMENT #FLORA & FAUNA

PRIMARY  
SOURCE

The Indian  
EXPRESS

SECONDARY  
SOURCE

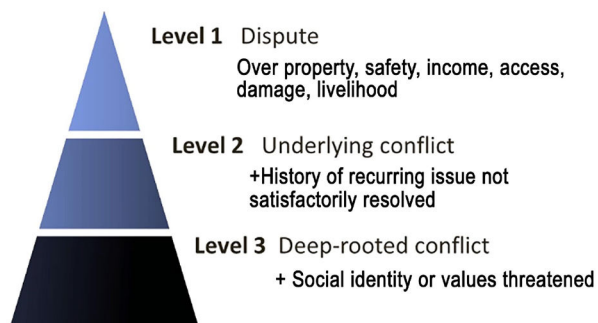
National wildlife  
action plan

*Wayanad is on the boil after a radio-collared wild elephant chased a 47-year-old man and trampled him to death, inside a gated property in a residential area. Locals allege inaction*

on the part of forest and revenue officials, and are demanding the capture of the killer elephant.

### WHAT IS HUMAN-WILDLIFE CONFLICT?

- Human-wildlife conflict is when encounters between humans and wildlife lead to negative results, such as loss of property, livelihoods, and even life.

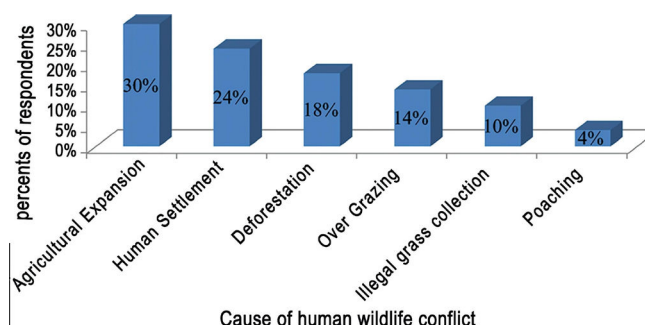


In India almost all the states are vulnerable to Human-wildlife conflict but in different intensity.

### WHAT ARE THE CAUSES BEHIND RISING HUMAN-WILDLIFE CONFLICT?

Human-wildlife conflicts are becoming more frequent, serious and widespread because of human population growth, agricultural expansion, infrastructure development, climate change and other drivers of habitat loss.

- Habitat Loss:** As human populations grow and urban areas expand, natural habitats are being destroyed at an unprecedented rate. This loss of habitat is forcing animals to venture into human settlements in search of food and water, often leading to conflicts with humans.
- Climate Change:** As temperatures rise, water sources dry up and food becomes scarcer, animals are being forced to venture further and further out of their natural habitats in search of resources. This brings them into closer contact with humans, increasing the likelihood of conflict.
- Human Encroachment:** As people move into previously undeveloped areas, they disrupt the natural balance of the ecosystem, often forcing animals to migrate or adapt to new conditions. Agriculture, deforestation, over grazing, poaching etc has increased human interference. This can lead to conflicts as animals struggle to adapt to their changing environment.



- Lack of Proper Planning:** As urban areas expand, there is often little consideration given to the impact on local ecosystems and wildlife. This lack of planning can result in human settlements being built in areas that were once the natural habitats of animals, increasing the likelihood of conflict.
- Human-Wildlife Interaction:** As more people travel to remote areas for tourism or adventure, they come into contact with animals that may not be used to human presence. This can lead to dangerous situations where humans and animals clash.

### IMPORTANT CASE STUDIES IN THIS REGARD

- Hemis National Park (Ladakh):** Covering 3,350 km<sup>2</sup> in trans-Himalayas, this is ideal habitat for snow leopard, wolf, and four species of wild sheep and goats. About 1600 people, living in 16 settlements across three valleys, inhabit the park. These people, largely agro-pastoralists, grow barley and certain vegetables, and own over livestock, of which 81% are sheep and goats and 11% are yaks. Reduced daytime guarding practices (as more children are going to school, and youths are less willing to watch over livestock), dramatic increase in livestock numbers due to increased use of modern animal husbandry techniques & increase in predator number on account of protection measure have led to increase in conflict.
- Sanjay Gandhi National Park** is one of the largest parks in the world found in the heart of a city, in this case Mumbai. However, in spite of its proximity to dense human populations, the report says that there have not been attacks on people. A fully grown leopard needs an average space of 10 sq. km. each. So, while there should be 11 or 12 animals in the forest, the National Park houses 21. The leopards prey on stray dogs instead of more wild fare. Due to the easy availability of this prey, they do not attack

humans. However this has raised the concern that wild leopards could contract rabies.

- **Wayanad region in Kerala:** The district's forests are a part of a greater forested area comprising Nagarhole Tiger Reserve, Bandipur National Park, and BR Tiger Reserve in Karnataka, and Mudumalai Tiger Reserve and Sathyamangalam Forest in Tamil Nadu. Decline in the quality of forest habitats, largely due to cultivation of alien plants — mainly acacia, mangium and eucalyptus — in forest tracts for commercial purposes and changes in agricultural practices like farmland being left unattended makes them ideal targets for wildlife looking to snack on bananas and pineapples, among the cultivated crops in the region.

#### **IMPACTS OF HUMAN-WILDLIFE CONFLICT**

- **On the species** - It may result in the decline and potential eradication of species.
- **On the communities** - Communities can experience financial losses and threats to health and safety, livelihoods, food security, and property. Crop damages, livestock depredation highly impact the local communities.
- **On the ecosystem** - Disturbed predator-prey balance, alterations in food web and reduced biodiversity further impact the ecosystem services having long term implication for the ecosystem as a whole.

#### **WHAT CAN BE A WAY AHEAD IN THIS REGARD?**

Important guidelines as per the National wildlife action plan 2017-2030 in this regard:

- Identify and document the range of conflicts for the wildlife species that regularly come into conflict with people. Develop national, regional and State level databases for all wild animals involved in HWC to document frequencies of conflicts, quantum of damage to human life and property, and wildlife deaths due to conflict.
- Draw up comprehensive, science-based species-specific and region-specific, conflict-mitigation plans. These plans should focus primarily on scientific management of wildlife populations and land-use practices that aid and abet conflicts in and around PAs as well as urban, semi-urban and rural landscapes. These plans should be jointly developed by forest managers, scientists, community leaders as well as communication experts. These should consider and address human practices

that promote conflict as well as incorporate traditions, beliefs and practices that allow for conflict resolution or enhancement of human- tolerance for wild animals.

- Constitute a well-trained and adequately equipped workforce in the State Forest Departments (SFDs) to actively address HWC situations in situ, especially those involving dangerous large mammals.
- Create a Centre of Excellence (CoE) for HWC mitigation, under the aegis of the MoEFCC, to address, develop and implement long-term and short-term measures to reduce the adverse impacts of such conflicts.
- Formulate and implement extensive education and awareness programmes to reduce the growing animosity among people towards wild animals involved in conflict situations, as well as to enlist their help in mitigating conflicts.
- Encourage community participation in HWC mitigation, by equipping them and training them in appropriate mitigation methods, as well as educating them to avoid mob formation and harassment of wild animals during operations by the wildlife managers and experts.

## **INDIA'S NATURAL GAS IMPORTS TO GROW AT 4.9% ANNUALLY TILL 2050**

#ENERGY #RESOURCES

PRIMARY  
SOURCE

BusinessLine

SECONDARY  
SOURCE

NATIONAL  
GEOGRAPHIC

*Net imports of natural gas by India, the world's fourth largest importer of liquefied natural gas (LNG), is expected to grow at an average of 4.9 per cent annually between 2022 and 2050.*

#### **WHAT IS NATURAL GAS?**

- Natural gas is a fossil fuel formed from plants, animals, and microorganisms that lived millions of years ago.
- As plants, animals, and microorganisms decompose, they are gradually covered by layers of soil, sediment, and sometimes rock. Over millions of years, the organic matter is compressed. As the organic matter moves deeper into Earth's crust, it encounters higher and higher temperatures.
- The combination of compression and high temperature causes the carbon bonds in the organic matter to break down. This molecular breakdown produces thermogenic methane—natural gas.



### COMPOSITION?

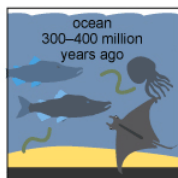
- Methane 97% (CH<sub>4</sub>)
- Ethane 0.919% (C<sub>2</sub>H<sub>6</sub>)
- Propane 0.363% (C<sub>3</sub>H<sub>8</sub>)
- Butane 0.162% (C<sub>4</sub>H<sub>10</sub>)
- Carbon dioxide 0.527% (CO<sub>2</sub>)
- Oxygen 0-0.08% (O<sub>2</sub>)
- Nitrogen 0.936% (N<sub>2</sub>)
- Other noble gases (e.g., He, Ne, Ar, Xe)

### Natural gas formation:

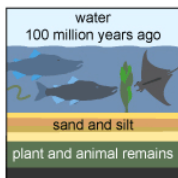
- Sedimentary basins trap huge reservoirs of natural gas.
- Natural gas deposits are often found near oil deposits.
- Deposits of natural gas close to Earth's surface are usually dwarfed by nearby oil deposits.
- Deeper deposits—formed at higher temperatures and under more pressure—have more natural gas than oil.
- Deepest deposits can be made up of pure natural gas.

### Petroleum and natural gas formation

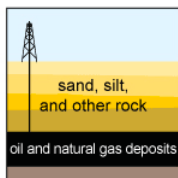
Tiny marine plants and animals died and were buried on the ocean floor. Over time, the marine plants and animals were covered by layers of silt and sand.



Over millions of years, the remains were buried deeper and deeper. The enormous heat and pressure turned the remains into oil and natural gas.



Today, we drill down through layers of sand, silt, and rock to reach the rock formations that contain oil and natural gas deposits.



Source: Adapted from National Energy Education Development Project (public domain)

### BIOGENIC VS THERMOGENIC METHANE

- Thermogenic methane is produced deep within the seafloor when organic material is degraded by the earth's heat.
- Biogenic methane is produced as a waste product when microorganisms called methanogenic archaea eat organic material; these microorganisms can only produce methane in reducing environments.
- Methanogens live in the intestines of animals (including humans) and in low-oxygen areas near the surface of Earth. Landfills, for example, are full of decomposing matter that methanogens break down into a type of methane called biogenic methane. The

process of methanogens creating natural gas (methane) is called methanogenesis.

**Note:** Although most biogenic methane escapes into the atmosphere, there are new technologies being created to contain and harvest this potential energy source.

Thermogenic methane can also escape into the atmosphere. Some of the gas is able to rise through permeable matter, such as porous rock, and eventually dissipate into the atmosphere.

Conventional Natural Gas	Unconventional Natural gas
<ul style="list-style-type: none"> <li>• Conventional gas is trapped in permeable material beneath impermeable rock.</li> <li>• Economical to extract and easily accessible.</li> </ul>	<ul style="list-style-type: none"> <li>• Biogas</li> <li>• Deep Natural Gas</li> <li>• Shale gas</li> <li>• Tight gas</li> <li>• Coal Bed methane</li> <li>• Methane hydrates</li> </ul>

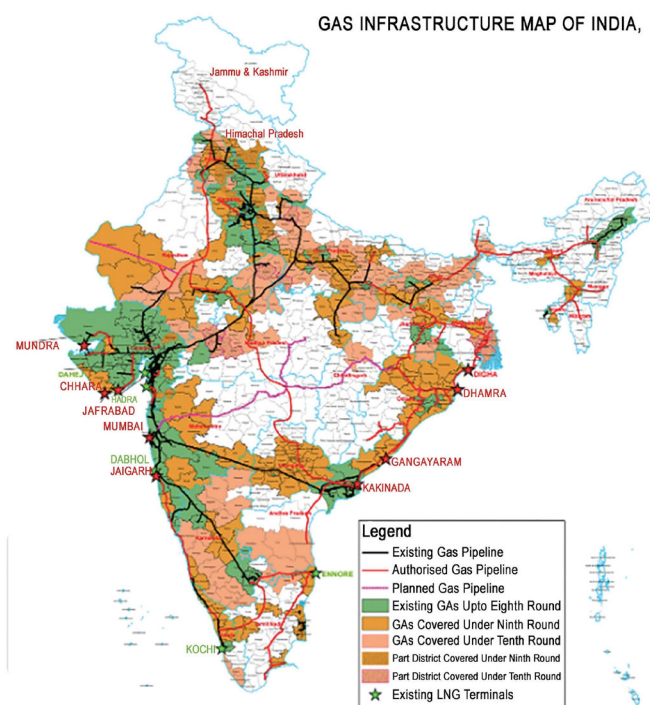
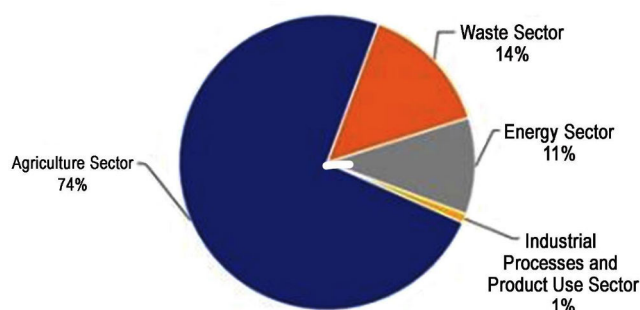
### NATURAL GAS IN INDIA

- India's geography heavily affects access to both its natural resources and to its natural gas imports.
- India does not import natural gas via pipeline, partially due to the deserts and mountains forming much of its northern border. As a result, domestic production and liquefied natural gas (LNG) imports remain the primary sources of India's natural gas supply.
- Most domestic production in India, about two-thirds in 2019, is from offshore production fields.
- India uses a complex pipeline infrastructure to link offshore natural gas production and LNG imports that arrive at coastal import terminals to the rest of the country.
- Presently in India the share of natural gas in energy basket is 6.7%. The Government has set a target to raise the share of natural gas in energy mix to 15% in 2030.

### METHANE EMISSIONS IN INDIA

- According to IEA, India=2<sup>nd</sup> largest methane emitter.
- The two predominant sources of methane emissions in India are enteric fermentation and paddy cultivation.





## ATMOSPHERIC RIVER

#CLIMATOLOGY

PRIMARY SOURCE: THE HINDU

Massive rainfall over California has resulted due to Atmospheric River Phenomenon. This has brought up water levels in California which had been suffering from drought for a prolonged period.

### WHAT IS ATMOSPHERIC RIVER?

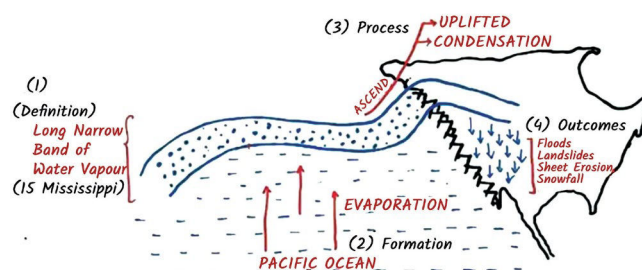
- These are the long, narrow regions in atmosphere that transport most of the water vapor outside the tropics.
- These columns of vapor move with the weather, carrying an amount of water vapor roughly equivalent to the average flow of water at the mouth of the Mississippi River. When the atmospheric rivers make

landfall, they often release this water vapor in the form of rain or snow.

- Although atmospheric rivers come in different shapes and sizes, for one to be a "true Pineapple Express," location matters. The tail end, where the moisture is pulled into the atmosphere, must start near Hawaii. Then the river must stretch continuously through the atmosphere to the U.S. West Coast.
- Between 30% and 50% of the annual precipitation on the West Coast occurs from just a few atmospheric river events, according to the NOAA.

### WHY DO THEY OCCUR?

- They can occur anywhere across the world, but they are most dominant over West coast of Northern America taking up the moisture from Pacific ocean.
- They also occur at eastern United States, where they often channel moisture from Caribbean.



### Consequences

- **Positive:** They bring much desired rainfall to the coastal areas which in turn is beneficial for economic activities like agriculture, transportation, fisheries and water supplies etc.
- **Negative:** High intensity atmospheric rivers lead to torrential rainfalls, flash floods, landslides, snowfall, sheet erosion and strong winter storms.

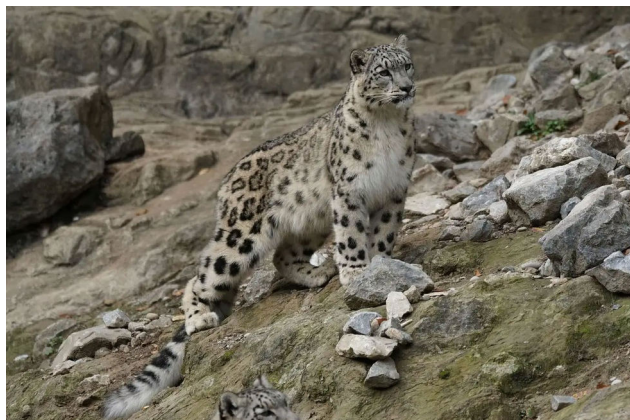
## STATUS REPORT OF SNOW LEOPARDS IN INDIA

#FLORA & FAUNA

PRIMARY SOURCE: moef.gov.in

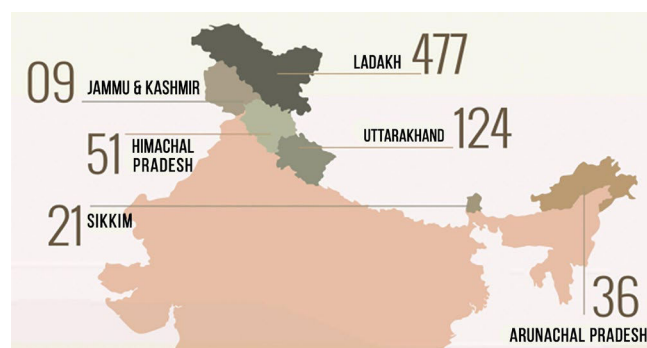
Ministry of Environment, Forest and Climate Change released the report on Status of Snow Leopards in India during the meeting of National Board of Wildlife. The estimation of the Snow Leopards was done under the Snow Leopard Population Assessment (SPA) Program. This is the first ever rigorous

examination of snow leopard populations in India, employing advanced methods such as occupancy modelling and camera trapping.



#### ABOUT SNOW LEOPARD POPULATION ASSESSMENT IN INDIA

- The Snow Leopard population in India has been estimated under the Snow Leopard Population Assessment in India (SPAI) conducted between 2019-23.
- Wildlife Institute of India (WII) is the National Coordinator for the SPAI program. The exercise was conducted by WII with the support of all snow leopard range states and two conservation partners (i) Nature Conservation Foundation, Mysuru (ii) WWF-India.
- SPAI is the first ever scientific exercise that reports Snow Leopard population in India.
- Snow Leopard population in India has been estimated to be **718 individuals**.
- The SPAI program covered 70% of potential snow leopard range in India of crucial snow leopard habitat across the trans-Himalayan region, including UTs of Ladakh and J&K, Himachal Pradesh, Uttarakhand, Sikkim and Arunachal Pradesh. **Total snow leopard range in India is estimated to be around 120,000 sq. km.**
- Estimated Snow Leopard population in different states: **Ladakh (477), Uttarakhand (124), Himachal Pradesh (51), Arunachal Pradesh (36), Sikkim (21), and Jammu & Kashmir (9).** (Ladakh has highest number of snow leopards in India).



Estimated population of snow leopards in different states

#### ABOUT SNOW LEOPARDS

- Scientific name of Snow Leopard is **Panthera uncia**.
- They are also called the '**ghosts of the mountains**'.
- The snow leopard is the **state animal of Himachal Pradesh**.
- Snow leopards are generally found at an elevation of 3,000 m to 5,200 m in India above the tree line. However, during winters, snow leopards may descend to lower elevations.
- The snow leopard's fur is white to brown and has black spots around its head and neck.
- It preys on Himalayan Blue Sheep, Himalayan Tahr, Tibetan Argali and Himalayan Ibex etc.
- Snow leopards are sparsely distributed in the high mountains of Central and South Asia **in 12 countries of Central Asia, from southern Russia to the Tibetan Plateau, including Mongolia, China, Afghanistan, Pakistan, India and Nepal.**
- Sixty percent of the geographic range of snow leopard falls in China, followed by Mongolia and India.
- In India, it is found in **Jammu and Kashmir, Ladakh, Uttarakhand, Arunachal Pradesh, Sikkim and Himachal Pradesh.**
- **Accommodation Type:** Forests, shrubs, grasslands, rocky areas.
- **IUCN Status:** Vulnerable
- **Listed in Appendix I of CITES** which prohibits international trade in animal parts and products except under exceptional, non-commercial circumstances.



**KEY FACTS ABOUT SNOW LEOPARD**

**Smallest of the big cats** with tails that can be nearly as long as their bodies.

**Perfect camouflage:** Snow leopards have thick, smoky-gray fur patterned with dark gray open rosettes and spots. This helps them to blend perfectly with rocky slopes of their habitat. (Rosettes are large rings enclosing smaller spots). It is for this reason they are known as **ghost of mountains**.

**Do not roar:** They can only hiss, growl and prusten. They give a 'main' call described as 'piercing yowl'. This is so loud; one can hear it over the roar of the river. Prusten, also known as chuffing, is a non-threatening vocalisation made by blowing through their nose while their mouth is closed.

**Swift movers:** Snow leopards are swift movers in a rugged terrain. They can travel for over 25 miles in a day and can jump as much as 50 feet in length.

**Well-adapted to cold temperatures:** The fur of this elusive species keeps them well insulated in cold weather.

**Solitary:** Snow leopards live a solitary life other than when they are mating. It is very rare to see two snow leopards together. Female snow leopards raise their kids alone for a period of 18 months after which the kids depart.

**Feed:** Snow leopards are carnivorous predators feed on **Blue Sheep (Known as Bharal in India), Asiatic Ibex (a large wild goat), Argali (wild sheep species),** marmots, pikas, deer and other small mammals.



**BLUE SHEEP**  
*Pseudois nayaur*

**IBEX**  
*Capra siberica*

**ARGALI**  
*Ovis ammon*

**Large range:** Snow leopards have large home ranges of up to 1,000 sq. km.

**IMPORTANCE OF SNOW LEOPARD**

- **Apex predator in the Himalayan ecosystem:** As an apex predator, snow leopard regulates the prey population in a top-down fashion. Thus, influencing the ecological equilibrium of its habitat.
- **Biomarker of health of Himalayan ecosystem:** A healthy and thriving population of snow leopard reflects the broader health and resilience of high-altitude alpine ecosystems in general and Himalayas in particular. The population estimation will also give a reflection of potential threats such as habitat degradation, climate induced shifts, besides human-wildlife conflicts.
- **Symbolic importance:** Snow leopards holds cultural and symbolic importance for many communities living in the high-altitude alpine ecosystems in its range countries.
- **Protecting Snow Leopard can in turn help in the protection of alpine high-altitude ecosystems:** Alpine high-altitude ecosystems are critical for source of perennial rivers for the Asian landmass and thus critical for the well-being of downstream populations.

**CONSERVATION STEPS TAKEN FOR SNOW LEOPARDS****Global Snow Leopard and Ecosystem Protection Program (GSLEP):**

- This program aims for sustainable development of high-mountain development issues using the conservation of charismatic snow leopards as a flagship.
- It is alliance of snow leopard range country governments and NGOs.
- GSLEP was founded by 2013 Bishkek Declaration by 12 snow leopard range countries.
- **12 Snow Leopard range countries are:** Afghanistan, Bhutan, China, **India**, Kazakhstan, Kyrgyzstan, Mongolia, Nepal, Pakistan, Russia, Tajikistan, Uzbekistan. (India is party to this program).
- **Secretariat of GSLEP:** Located in Bishkek, Kyrgyz Republic.

**INITIATIVES UNDER GSLEP**

- **Population Assessment of the World's Snow Leopards (PAWS):** It is an initiative of GSLEP to develop a global snow leopard population assessment.
- **Secure 20 by 2020:** This goal aims to identify and secure at least 20 healthy populations of snow leopards across



the range of snow leopard (20 by 2020). Many of these populations will cross international boundaries. Criteria for defining healthy populations of snow leopards:

- Representing at least 100 breeding age snow leopards
- Containing adequate and secure prey populations.
- Having connectivity to other snow leopard populations.
- Under this, a total of **24 GSLEP landscapes** have been identified for snow leopards across the snow leopard's range. As part of identifying and securing snow leopard snow leopard GSLEP landscapes, India has identified three such landscapes: Hemis-Spiti, Nanda Devi – Gangotri, Khangchendzong – Tawang.
- **National Snow Leopard and Ecosystem Priorities:** Each of the 12 Snow Leopard range countries have developed to align national snow leopard conservation strategies with global goals under GSLEP.

#### PROJECT SNOW LEOPARD

This program was launched by Ministry of Environment, Forest and Climate Change in 2009 for landscape restoration of snow leopard habitat conservation and implementation of participatory landscape-based management plans.

#### DEDICATED AREAS FOR IN-SITU CONSERVATION OF SNOW LEOPARDS IN INDIA

- India has notified **three GSLEP Landscapes:** Hemis-Spiti, Nanda Devi – Gangotri and Khangchendzong Tawang.
- **Three Biosphere Reserves** with an area of 21,300 sq. km. – Cold Desert (Himachal Pradesh), Nanda Devi (Uttarakhand), Khangchendzong (Sikkim).
- There are **57 Protected Areas (National Parks and Wildlife Sanctuaries)** which covers 34% of snow leopard range in India.

## OFFSHORE WIND ENERGY

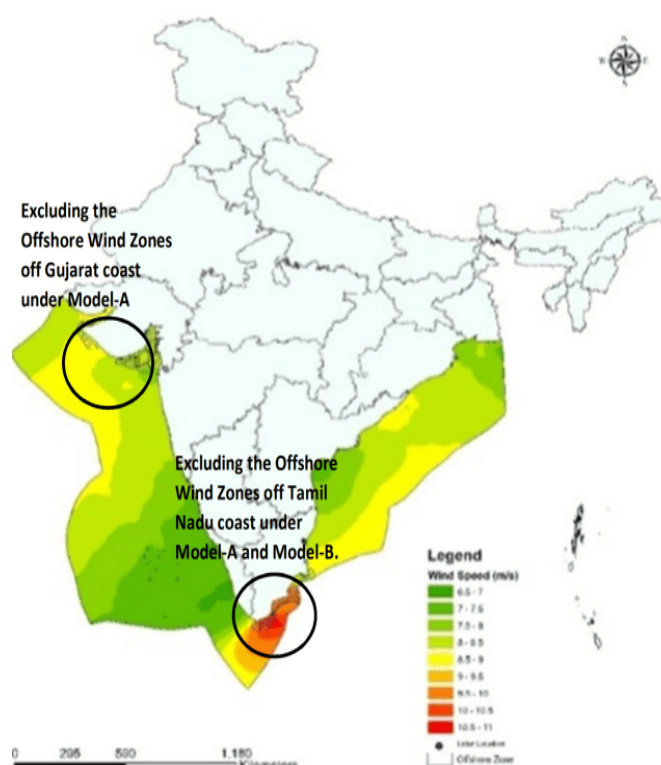
#RENEWABLE ENERGY #SUSTAINABLE  
DEVELOPMENT

PRIMARY  
SOURCE THE HINDU

*Presenting the interim budget for the Financial Year 2024-25; the Finance minister said that the government would provide viability gap funding (VGF) for the initial capacity of 1 GW of offshore wind power.*

- Offshore wind energy is clean and renewable energy obtained by taking advantage of the force of the wind produced on the high seas.
- Wind reaches a higher and more constant speed on the high seas as compared to that on land due to the absence of barriers.
- In order to make the most of this resource, mega-structures are installed that are seated on the seabed and equipped with the latest technical innovations.
- According to studies conducted by NIWE, there is good potential for development of offshore wind power off the Southern tip of India and off the West Coast for development of wind power in India's coastline.

**Indicative Offshore Wind Speed Map at 100m amsl (upto Exclusive Economic Zone)**



#### BENEFITS OF OFFSHORE WIND ENERGY

- Renewable, unlimited and non-polluting.
- Offshore wind energy turbines are much larger in size (5-10 MW per turbine) as against 2-3 MW of an onshore wind turbine.
- Reduces pressure on land resources.
- Barrier-free regions thus higher wind speed and efficiency
- Visual and acoustic impact is small
- No issues of land acquisition.
- Ease of maritime transport, which has few limitations about cargo and dimensions in comparison with land

transportation, has made it possible for offshore wind turbines to reach much larger unit capacities and sizes than onshore wind turbines.

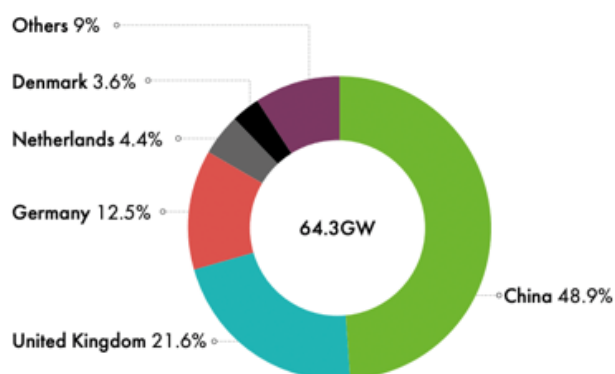
#### CHALLENGES OF OFFSHORE WIND ENERGY

- The major issue lies in the challenges about high costs and technological challenges of offshore wind facilities owing to underwater construction constraints. Thus, making the per megawatt cost of offshore wind turbines higher than the cost of onshore wind turbines.
- Construction and operations may disturb the delicate ecological landscape, which in turn may affect species and biodiversity. For ex. Identified area for project like Gulf of Khambhat is an ecologically sensitive zone.

#### GLOBAL STANDINGS

- As of 2023, China continues to be the global leader in offshore wind energy capacity followed by the United Kingdom and Germany.

Total offshore wind installations by market



#### INDIA AND OFFSHORE WIND ENERGY

- India is blessed with a coastline of about 7600 km surrounded by water on three sides and has good prospects of harnessing offshore wind energy.
- **Ministry of New and Renewable Energy (MNRE) is the nodal Ministry** for the development of Offshore Wind Energy in India.
- MNRE has notified the '**Offshore Wind Energy Policy**' in 2015 which provides a framework for the development of offshore wind power development up to a distance of **200 nautical miles** from the baseline i.e., up to the country's Exclusive Economic Zone.
- **National Institute of Wind Energy (NIWE), Chennai** is the nodal agency to carry out resource assessment; surveys and studies in EEZ demarcate blocks and facilitate developers for setting up offshore wind energy farms.
- For the initial phase of developments, **potential offshore wind zones off the coast of Gujarat and**

**Tamil Nadu** have been identified through meso-scale study.

- **A revised Strategy** for the development of offshore wind energy projects has been issued in 2023. Further, **The "Offshore Wind Energy Lease Rules, 2023"** to regulate the allocation of offshore wind sea blocks to developers have been notified.
- India has set a **target of installing 30 GW of offshore wind projects by 2030**. The government estimates that the states of Gujarat and Tamil Nadu alone have around 70 GW of potential for offshore wind power.
- While India's onshore wind energy capacity has reached 42.633 GW (4<sup>th</sup> highest in the world), offshore wind energy in the country is yet to gain momentum.

## COMPRESSED BIOGAS

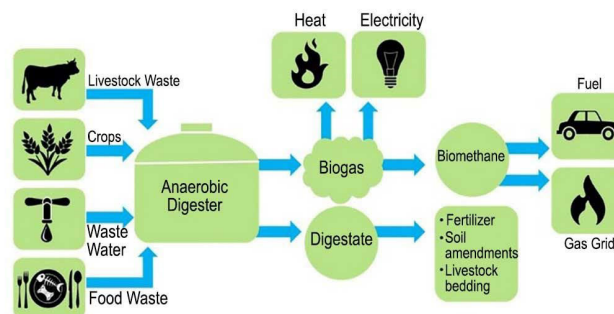
#RENEWABLE ENERGY #SUSTAINABLE DEVELOPMENT

PRIMARY SOURCE THE HINDU

CO<sub>2</sub> emissions generated in producing electricity from Natural Gas are only 54% of what is emitted in producing the same amount of electricity from coal. However, there is one major challenge of high import dependence (50% of the total gas consumed.) and these imports are going to increase further. Further, possibility of the supply chain disruption also persists which can hamper energy security of India. This challenge can be addressed to a large extent by blending domestically produced Compressed Biogas (CBG) with Natural Gas.

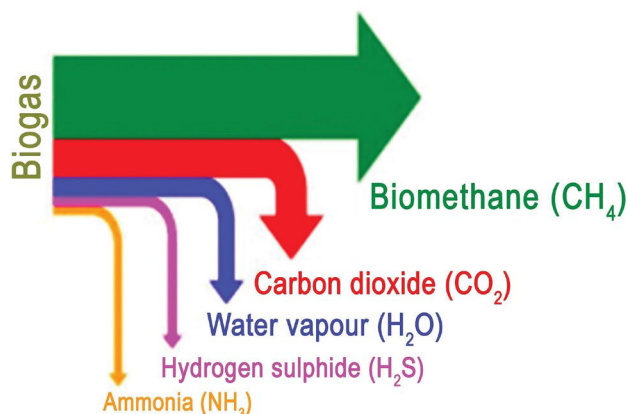
#### WHAT IS BIOGAS?

- Biogas is produced when bio-degradable organic materials/wastes such as cattle-dung, biomass from farms, gardens, kitchens, industry, poultry droppings, night soil and municipals wastes are subjected to a scientific process, called Anaerobic Digestion (A.D.) in a Biogas Plants.





- Biogas contains about 55-65 % of methane, 35- 44 % of carbon dioxide and traces of other gases, such as Hydrogen Sulphide, Nitrogen, water vapour, Nitrogen, Carbon monoxide and Ammonia.
- The presence of water vapor, H<sub>2</sub>S, and CO<sub>2</sub> make biogas very corrosive and unsuitable to be used as fuel.

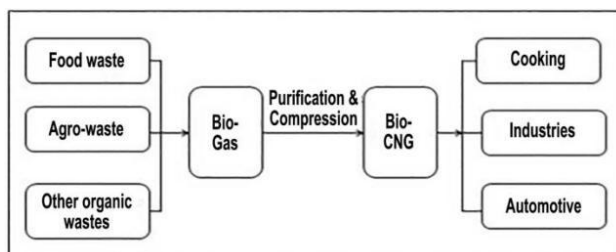


**Fig 1 : Components of biogas**

- The digested slurry produced from Biogas Plants as a by-product is a better source of nutrient enriched organic manure for use in Agriculture. It not only helps in improving the crop yield but also maintain soil health.

#### **WHAT IS COMPRESSED BIOGAS (CBG)?**

- The biogas is purified to remove hydrogen sulfide (H<sub>2</sub>S), carbon dioxide CO<sub>2</sub>, water vapor and compressed as Compressed Bio Gas (CBG), which has methane (CH<sub>4</sub>) content of more than 90%.
- CBG has calorific value and other properties similar to CNG and hence can be utilized as green renewable automotive fuel. Thus it can replace CNG in automotive, industrial and commercial areas, given the abundance biomass availability within the country.



- The most widely used technologies for biogas upgrading are water scrubbing, Pressure Swing Adsorption, membrane, and chemical scrubbing. Of these technologies, water scrubbing and Pressure Swing Adsorption are considered to be most

appropriate on a small scale due to low cost and easy maintenance.

**Note-** CNG stands for 'compressed natural gas'. Bio-CNG is a renewable fuel obtained by purifying biogas – in contrast to CNG, a non-renewable source of energy.

#### **WHAT ARE THE BENEFITS OF COMPRESSED BIOGAS?**

- **Import reduction** of natural gas and crude oil.
- **Waste management**– Utilization of agricultural residue, cattle dung and MSW.
- Providing additional source of revenue to the farmers, increasing rural employment and amelioration of the rural economy.
- Towards **self-sufficiency** in energy & providing a buffer against **energy security** concerns and crude/gas price fluctuations.
- A boost towards fulfilment of **National commitments** in achieving climate change goals.

#### **WHAT ARE THE CHALLENGES INVOLVED?**

- **Seasonally available and varying quality of the raw material.** Preliminary processes like collection, transportation, and segregation may also limit the adaptation.
- Production is mostly located near the sources of raw material hence **additional costs are incurred in storage and transportation.**
- **Uncertain price realization** – given the uncertainty in offtake, either the surplus gas has to be flared or sold in the local market with price realisation uncertainty. For example, in the SATAT scheme, oil marketing firms offer a price which includes transportation of CBG in cascades only upto 25 km and in case of low off take, there is no commitment to pay.
- **Lack of supporting infrastructure**– The CBG programme envisaged simultaneous development of linkages to natural gas pipeline network for injection of CBG in the pipeline for blending and transport. This has not progressed.
- Production process requires **skilled technicians.**
- **No specific standards** existing in India for installation, operation, and maintenance of these plants.
- **Lack of incentives:** For e.g. Currently, there's no system for trading, purchasing, and monitoring of green attributes of CBG.

**WHAT ARE THE STEPS TAKEN BY GOVERNMENT IN THIS REGARD?**

- **National Policy on Biofuels 2018** emphasizes on promotion of advanced Biofuels including CBG.
- **Galvanizing Organic Bio-Agro Resources Dhan (GOBAR-DHAN)** scheme to convert cattle dung and solid waste in farms to Bio-CNG (CBG) and compost. GOBAR-DHAN scheme proposes to cover 700 projects across the country.
- **Central Financial Assistance (CFA) for Bio-CNG** has been notified by Ministry of New and Renewable Energy. Financial assistance under the program is available for Biogas generation, Bio CNG generation, Power generation from MSW, Biomass Gasifier etc.
- **SATAT Initiative:** An initiative of Ministry of Petroleum and Natural Gas that promotes entrepreneurs to set up Compressed Biogas plants, produce and supply CBG to Oil Marketing Companies for sale as automotive and industrial fuels.

**An Oil Ministry report has proposed trading CBG's green attributes and the creation of an extra revenue stream for biogas producers by monetizing these attributes.**

- One key aspect involves proposing CBG blending mandates for entities marketing CNG and PNG.
- The report suggests trading CBG's green attributes and the creation of an extra revenue stream for biogas producers by monetizing these attributes.
- This strategy involves creating certificates that hold a premium value over standard natural gas.
- Recently, the National Biofuels Coordination Committee, led by the Union Petroleum Minister, announced the gradual mandatory blending of CBG in the CNG and PNG segments.
- The Compressed Biogas Obligation (CBO), which is voluntary till FY25, is proposed to be made mandatory from FY26.
- The amended Energy Conservation Act empowers the Centre to mandate consumption of a particular non-fossil fuel in laid down proportion.

*A highly lethal form of bird flu has been detected in Antarctic penguins for the first time. The virus, H5N1, was confirmed in two gentoo penguins that were found dead on Sea Lion Island in the Falkland Islands, a British territory.*

- Penguins are a group of aquatic flightless birds.
- They live almost **exclusively in the Southern Hemisphere** and **only one species, the Galápagos penguin, is found north of the Equator.**
- Highly adapted for life in the ocean water, penguins have counter shaded dark and white plumage and flippers for swimming.
- Most penguins feed on krill, fish, squid, and other forms of sea life which they catch with their bills and swallow whole while swimming.
- The **largest living species** is the **emperor penguin.**
- The **smallest penguin species** is the **little blue penguin** also known as the **fairy penguin.**
- Larger penguins generally inhabit colder regions, and smaller penguins inhabit regions with temperate or tropical climates.

**SPECIES OF PENGUINS AND THEIR STATUS**

Species of Penguins	IUCN Status
Emperor Penguins	Near Threatened
Royal Penguin	Least Concern
Adelie Penguin	Least Concern
Magellanic Penguin	Least Concern
Humboldt Penguin	Vulnerable
Fiordland Penguin	Near Threatened

**ADAPTATION****1. Heavy Bones**

Although penguins are birds, they have heavy bones, while typical birds have bones that are hollow. The heavy bones allow the penguins to stay underwater like a scuba diver.

**2. Paddle Flippers**

Unlike fish, the penguin does not have fins. Instead, it uses its wings to move underwater. The paddle-like flippers of penguins allow them to "fly underwater."

**3. Strong Legs**

Penguins have strong legs that are also set back on the body. This position allows the penguin to balance itself while standing and yet makes it easy for them to steer when swimming.

**PENGUINS**

#FLORA &amp; FAUNA

PRIMARY  
SOURCE

THE HINDU

#### 4. Webbed Feet and Claws

A penguin's feet are webbed and clawed. The webbing works in the same way as the feet of a duck. It gives the penguin more surface tension or coverage to allow it to steer.

#### 5. Long and Thin Bill

Penguins have a powerful bill that allows them to catch fish and squid. Since they have no teeth, they must rely on this bill to clasp the prey tightly, especially underwater.

#### 6. Waterproof Feather

Penguins live in cold regions of the earth. To survive extremely cold temperatures, they have adapted to have feathers that keep them warm. Their feathers have a waterproof layer of insulation. Without this, they will die of hypothermia.

#### 7. Blubber or Fat

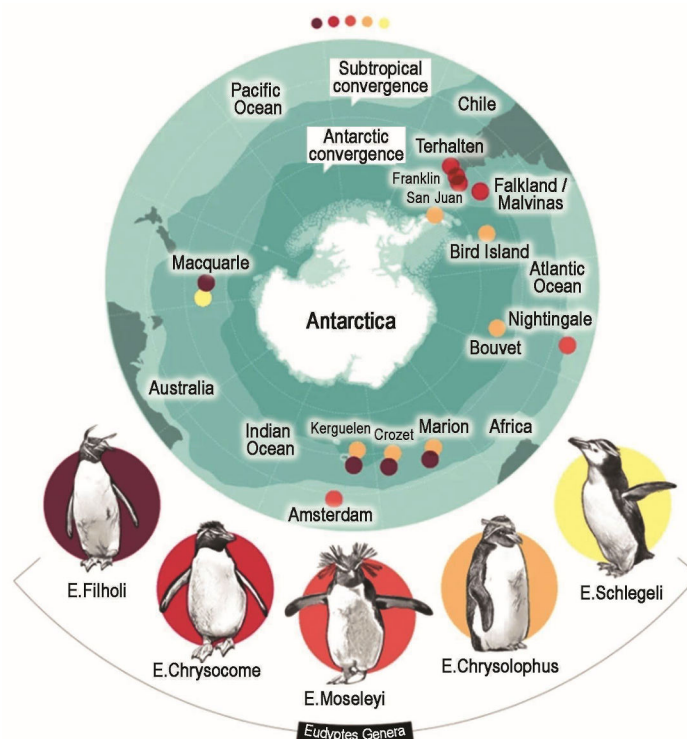
Another physical adaptation of penguins is the blubber. They have a layer of fat under the skin, and this adds to their capability to stay warm.

#### 8. Counter Shades

Counter shade means that penguins are dark at the back and white at the front. All adult penguins are like this. The theory is that this is adaptive camouflage.

#### 9. Adaptive Swimming

#### **GEOGRAPHICAL DISTRIBUTION**



Penguins need to swim fast to catch prey and evade predators. With all the adaptations combined, such as their blubber, feather, and paddle wings, they are well-equipped to navigate the sea and survive.

#### 10. Social Structure

Apart from physical adaptations, penguins adapted to become social animals as it makes survival easier. For example, they huddle together when it is extremely cold.

#### **HABITAT**

- Contrary to popular belief, they're not specifically dependent on a cold climate, but on nutrient-rich waters that sustain a productive enough food-chain to keep them in fish. In the tropical Galápagos and Peru, this is delivered by upwellings of deep oceanic water.
- Penguins prefer islands and remote continental regions without land predators to ensure their survival.
- Their inability to fly is not a disadvantage in these areas.
- Penguins are highly specialized marine birds adapted to long periods at sea.
- They are commonly found near nutrient-rich, cold-water currents, ensuring a steady food supply.
- Different penguin species thrive in diverse climates, from tropical islands like the Galápagos for some to the icy waters of Antarctica for others.

- Penguins are distributed across various regions, with some species inhabiting tropical areas like the Galápagos Islands.
- Others, like emperor penguins, are restricted to the pack ice and waters of Antarctica.
- Their distribution is influenced by the availability of food and suitable conditions for nesting.

**WHY NOT IN NORTHERN HEMISPHERE?**

- Penguins do not live in the Northern Hemisphere because predators such as polar bears and arctic foxes would limit their survival.
- In addition, many islands in the northern hemisphere are surrounded by sheer rocks, so penguins can't land on them.

## COCOA PRODUCTION

#AGRICULTURE

**PRIMARY  
SOURCE**THE HINDU  
BUSINESS LINE

*Prices of Cocoa reached \$5,000, which is a major concern for the Chocolate makers. Increase in prices of cocoa have compounded chocolate producers' concerns as the sugar and energy prices are rising as well.*

**COCOA PRODUCTION**

- Cacao tree is a small (4-8 m height) evergreen tree and is found in tropical regions. The major region is the Cocoa belt, an area of land around the equator between 20 degrees latitude north and south. The tree can be grown up to 300 m above mean sea level.
- Cocoa bean is the dried and fully fermented seed of Theobroma cacao from which cocoa solids (a mixture of non-fat substances) and cocoa butter (fat) can be extracted.
- Cocoa is a native plant of the Amazon rainforest.

**CONDITIONS ARE NECESSARY FOR CACOA TREE****Humid Climate with uniform heat:**

- Requires a minimum of 90-100 mm rainfall per month with an annual rainfall of 1500-2000 mm.
- If dry periods are prolonged, irrigation scheduling is necessary.
- Temperature range of 15°-39°C with optimum of 25°C is considered ideal.

**Shade:**

- Cocoa was evolved as an under-storey crop in the Amazonian forests.
- Requires much heat but direct sunlight is harmful.
- Commercial cultivation of cocoa can be taken up in plantations where 50 percent of light is ideally available.
- Under Arecanut 30-50% of sunlight penetrates through their canopy which can be intercepted by cocoa.

**Soil:**

- Fairly loose, deep, well drained, clayey and sandy loam soils are suitable.
- Rich in nitrogen, iron and potassium.
- Grows well in the pH range of 6.5 to 7.0.
- Heaviest crops come from cocoa grown on newly cleared virgin equatorial forest soils with high humus content.
- Manuring in long-established groves enhances the yields.

**Protection from strong winds:**

- Strong winds are harmful as they often blow off unripe pods.
- Hurricanes do great damage to the cocoa trees in the West Indies and Central America.

**Harvesting:**

- Harvested after 5 years, when the pods change colour, i.e. turn yellow or red.
- Thousands of flowers produce only a few pods (about 80 per year), inside which are beans are surrounded by mucilage, a sweet, white pulp.
- November-March and May-July are best times to ripen the pods.

**MAJOR PRODUCING REGIONS**

- **More than 70 percent of the world's cocoa beans come from four West African countries:** Ivory Coast, Ghana, Nigeria and Cameroon.
- The **Ivory Coast and Ghana are by far the two largest producers of cocoa, accounting for more than 50 percent of the world's cocoa.**
- Central and South America, south-eastern Asia and the Caribbean account for the **other 25 percent.**
- In India, Cocoa is being cultivated in the States of Kerala, Karnataka, Andhra Pradesh and Tamil Nadu.

- **Most of the Cocoa cultivation in India happens in Andhra Pradesh and Kerala accounting for nearly 80% of the total produce.**
- The highest productivity is also in **Andhra Pradesh which is 950 kg/ha.**
- In India, it is mainly cultivated as intercrop with Arecanut and Coconut.

## PROMISE OF VOLUNTARY CARBON MARKET

#CLIMATE FINANCE #CLIMATE CHANGE

PRIMARY SOURCE THE HINDU BUSINESS LINE

*Two months ago, in consultation with the Bureau of Energy Efficiency (BEE), India's Power Ministry amended the Carbon Credit Trading Scheme (CCTS).*

### WHAT IS CARBON CREDIT TRADING SCHEME?

- Energy conservation amendment act 2022 added new clauses authorising parliament to establishment a domestic carbon credit trading scheme.
- The Bureau of Energy Efficiency (BEE), an agency established by the Ministry of Power launched the Carbon Credit Trading Scheme to address the issue of greenhouse gas (GHG) emissions and mitigation of climate change in the country.
- The scheme is aimed at facilitating trading of carbon credits and incentivise and reward entities that reduce, remove or avoid greenhouse gas emissions.
- It assigns a value, known as a carbon credit, to each tonne of carbon dioxide equivalent (tCO<sub>2</sub>e) reduced or avoided. These credits could be bought, sold and traded within the country's carbon market framework.
- Carbon credit certificates are earned by entities that are covered under the law by reducing emissions. These certificates are tradeable.
- This permit can also be purchased by entities that emit more than a pre-determined threshold or sold by entities emitting less than the threshold under the rules of the trading scheme.
- In other words, companies with low(er) emissions can sell their extra allowance to larger emitters.

**Note:** as of now it does not include CCUS (Carbon capture utilization and storage) formally but government has indicated its willingness to include it in future.

### WHAT IS THE RECENT AMENDMENT IN CCTS?

- On account of this amendment, the CCTS now provides for an offset mechanism — in addition to its pre-existing compliance regime.
- Compliance mechanism involves mandatory implementation among 'obligated' entities (which have a legal obligation to reduce emissions).
- Voluntary markets are driven by businesses seeking to decrease their carbon footprint (without a legal mandate to do so), including by 'offsetting' greenhouse gas (GHG) emissions on account of corporate net-zero commitments.
- Under the amended CCTS, nonobligated entities can voluntarily register projects in sectors identified by a national steering committee for securing tradable carbon credit certificates (CCCs). These CCCs will be issued after evaluative exercises conducted by a BEE-accredited agency.

## INDIA-BANGLADESH TIGER CONSERVATION

#FLORA & FAUNA #PROTECTED AREAS

PRIMARY SOURCE THE HINDU

*A cross-border initiative, focused on harmonious coexistence with tigers in the Sundarbans, seeks to preserve biodiversity in both India and Bangladesh.*

### INTEGRATED TIGER HABITAT CONSERVATION PROGRAM

- It is initiated in 2014, is a grant making initiative which contributes to the **Global Tiger recovery Programme.**
- The Programme consists of a portfolio of large-scale projects in Key Tiger conservation Landscapes across **Bangladesh Bhutan, India, Indonesia, Nepal, and Myanmar.**
- It is supported by **IUCN and Germany's KfW Development Bank.**
- Divided into different phases, the first phase of the Tiger Programme started in 2014 with projects implemented between 2015 and 2021.
- Phase two and phase three projects are currently ongoing and will run until 2024.
- Most recently, KfW and IUCN signed an agreement for a fourth phase that will extend the Tiger Programme until 2027.



**GLOBAL TIGER RECOVERY PROGRAMME**

- This milestone initiative was done by the **World Bank in 2010, under the aegis of its ongoing program, "The Global Tiger Initiative" (GTI).**
- The convening power and presence of the World Bank enabled the GTI platform to bring together all Tiger Range Countries (TRCs) and like-minded organisations for saving the wild tiger across its range.

**SUNDARBANS**

- The Sundarbans mangrove forest, one of the largest such forests in the world (140,000 ha), lies on the delta of the **Ganges, Brahmaputra, and Meghna rivers on the Bay of Bengal.**
- It is the **largest contiguous mangrove forest** in the world.
- It is adjacent to the border of **India's Sundarbans World Heritage site inscribed in 1987.**
- The site is intersected by a complex network of **tidal waterways, mudflats and small islands of salt-tolerant mangrove forests** and presents an excellent example of ongoing ecological processes.

- The area is known for its wide range of fauna, **including 260 bird species, the Bengal tiger and other threatened species such as the estuarine crocodile and the Indian python.**
- The Sundarbans are of universal importance for globally endangered species including the Royal Bengal Tiger, Ganges and Irrawaddy dolphins, estuarine crocodiles, and the critically endangered endemic river terrapin (Batagur baska).
- It is **the only mangrove habitat in the world for Panthera tigris (Tiger) species.**
- Sundarbans National Park was declared as the core area of Sundarbans Tiger Reserve in 1973 and a wildlife sanctuary in 1977.
- It has been designated as a **Ramsar site since 2019.**
- It is considered in a World Network of Biosphere Reserve (Man and Biosphere Reserve) from 1989.

**FAUNA**

- Faunal Species are Mammalian Species, Reptiles, and Birds.
- These ranges of animals are also included in schedule I and II (rare & endangered) of the wildlife protection act 1972.
- 14 species are also found in Appendix I of the CITES.
- According to the earlier records animals like Wild Buffalo, Barking Deer, Javan Rhino, Leopards, Barasingha were once also found in the Sundarbans region.
- Nevertheless, as per the habitat changes in habitat and human-induced pressures of these animals became locally extinct.

**MULTANI MITTI**

#PRELIMS SNIPPETS #SOIL

PRIMARY  
SOURCE THE HINDU

*During farmers protest, farmers were seen applying a thick layer of toothpaste while others took to a mix of Multani mitti (mud pack) and water to ease the burning sensation caused by tear gas.*

- Multani Mitti, also known as **Fuller's Earth**, is a crucial natural beauty ingredient that can be found in many Indian households.
- Originates from Multan in Pakistan.

## COMPOSITIONS

Its primary constituents include:

- **Aluminum Silicate:** This mineral compound gives Multani Mitti its absorbent properties, allowing it to draw out impurities, excess oil, and toxins from the skin.
- **Magnesium Chloride:** Magnesium chloride contributes to the mineral content of Multani Mitti. It aids in replenishing the skin and promoting overall skin health.
- **Calcium Chloride:** Calcium chloride is another mineral present in Multani Mitti. It assists in tightening the skin and can help reduce the appearance of pores.
- **Iron Oxides:** These natural pigments are responsible for the various colors of Multani Mitti, such as brown and green. Iron oxides may also provide some antioxidant benefits to the skin.
- **Water Content:** Multani Mitti contains a significant amount of water, which helps in making pastes and masks when mixed with other liquids like rose water, yogurt, or milk.

## PROPERTIES OF MULTANI MITTI

- **Acne Property:** Multani Mitti is renowned for its ability to combat acne. Its natural absorbent properties help in removing excess oil and impurities from the skin, preventing breakouts.
- **Anti-Inflammatory Property:** It exhibits anti-inflammatory characteristics, making it effective in soothing and calming irritated or inflamed skin. This property can help reduce redness and swelling.
- **Astringent Activity:** Multani Mitti acts as an astringent, tightening and toning the skin. It can help minimize the appearance of pores and enhance skin texture.
- **Absorbent Property:** One of its prominent qualities is its absorbent nature. Multani Mitti readily absorbs excess sebum, leaving the skin feeling fresh and oil-free.
- **Antimicrobial Property:** It possesses natural antimicrobial properties, which can assist in preventing bacterial growth on the skin. This is particularly beneficial for acne-prone skin.
- **Skin Brightening Property:** Regular use of Multani Mitti can promote a brighter and more radiant complexion. It helps in removing dead skin cells and impurities, revealing fresher-looking skin.

## VADHAVAN PORT

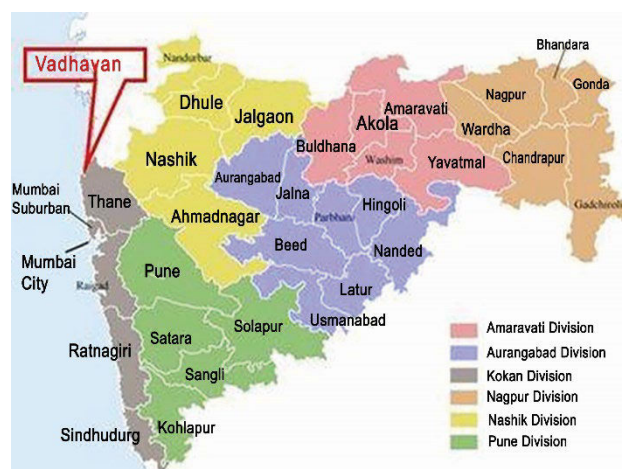
#PRELIMS SNIPPETS #LOCATIONS

PRIMARY  
SOURCE THE HINDU

The Environment Ministry has cleared the ₹76,000 crore odd Vadhavan deep-sea port project, off Mumbai.

- The proposed Vadhvan Port is located near **Dahanu, in the northern boundary of Maharashtra, Palghar District.**
- Vadhavan will be constructed by the joint venture in which **Jawaharlal Nehru Port Authority (JNPA) will have 74 per cent stake and Maharashtra Maritime Board (MMB) at 26 per cent.**
- It has a natural draft of 20 meters depth at a distance of 5 km.

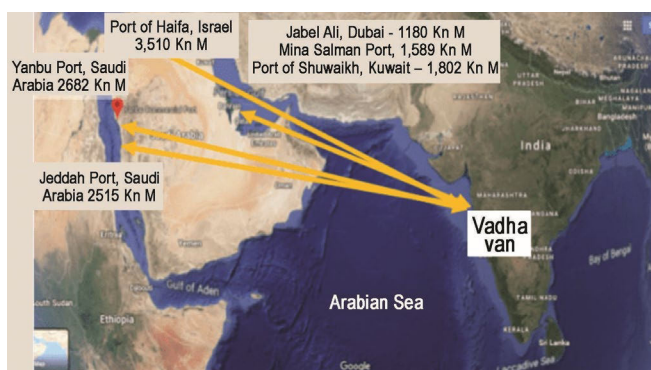
**Deep Draught Port:** The term "deep draft" is a term to describe ports that can accommodate large vessels such as big cargo ships.



- It has a potential to cater the vast hinterland region covering states of: Maharashtra, Gujarat, Western parts of Madhya Pradesh and North Indian states.

## SALIENT FEATURES

- Development of a Port at Vadhavan has been conceived under Sagarmala Program, an initiative of the Govt. Of India, to augment **Port Led Development and Development of Coastlines.**
- The objective is to augment and develop **Green Field Port to handle growing traffic demand from Major Ports on the West Coast.**
- The new Port at Vadhavan will be developed as a **deep draught Port** to cater to large containers, bulk, and crude vessels.
- No capital dredging required in navigational channel & harbour area as draft of 18 m is naturally available.



## GULMARG AVALANCH

#PRELIMS SNIPPETS #GEOMORPHOLOGY

PRIMARY SOURCE THE HINDU

*The group was skiing in the higher reaches known as Army Ridge in the tourist town in Baramulla; one injured skier hospitalized; the avalanche was triggered by heavy snowfall in the region; Khelo Games participants safe.*

- Gulmarg literally means “Meadow of flowers”. It is located in Baramulla district of Jammu and Kashmir.
- One of the main attractions in Gulmarg is the **Gulmarg Gondola, the Highest Cable Car in the world.**
- Tourists can enjoy horse Riding and can go riding to the magnificent “Strawberry Valley”, Leopards Valley and ride up to “Kongdori” to see the frozen lake of “Al-Pathar”.
- Gulmarg in winter is a magnificent experience, fully covered in a white blanket of Snow which turns it into a skier paradise.

### AVALANCHE



- Avalanche, a mass of material moving rapidly down a slope.

- An avalanche is typically triggered when material on a slope breaks loose from its surroundings; this material then quickly collects and carries additional material down the slope.
- There are various kinds of avalanches, including **rock avalanches (which consist of large segments of shattered rock)**, **ice avalanches (which typically occur in the vicinity of a glacier)**, and **debris avalanches (which contain a variety of unconsolidated materials, such as loose stones and soil).**
- Snow avalanches constitute a relatively common phenomenon in many mountainous areas.

### CONDITIONS

- The occurrence of an avalanche depends on the interaction of **mountainous terrain, weather conditions, snowpack conditions, and a trigger.**
- Slab avalanches typically occur on **slopes of 30 to 50 degrees.**
- The probability of avalanches may be **increased or decreased** by several other terrain features, such as **slope shape, a slope's exposure to sun and wind, and elevation.**

### PREDICTION AND FORECASTING

- Forecasting combines the historical knowledge of past conditions with their **knowledge of the affected terrain, current weather, and current snowpack conditions** to predict when and where avalanches are most likely to occur.

### INDIA

- An avalanche monitoring radar, the first of its kind in India, has been installed in North Sikkim by the **Army and Defense Geoinformatics and Research Establishment (DGRE).**
- It has the capability to **detect avalanches within three seconds** of its trigger and will assist in saving lives of troops and reducing damage to property in super high-altitude areas.

## MADE FROM RED ANT, KAI CHUTNEY OF ODISHA RECEIVES GI TAG

#PRELIMS SNIPPETS #FLORA & FAUNA



**PRIMARY  
SOURCE** pib

*Red Ant Chutney, locally known as Kai Chutney made by tribal people in Odisha's Mayurbhanj district has received Geographical Indication Tag in January, 2024.*

#### **ABOUT KAI CHUTNEY**



- Kai Chutney is made with red weaver ants in Simlipal Tiger reserve by tribal's in Mayurbhanj district of Odisha.
- The chutney has healing properties, boosts immunity, ensures nutritional security of the tribal people. Red Weaver Ants contain valuable proteins, calcium, zinc,

vitamin B12, iron, magnesium, potassium, sodium, copper, amino acids etc.

- Red Weaver Ants are locally known as Kai Pimpudi in the region.

#### **ABOUT RED WEAVER ANTS**

- Red Weaver ants form colonies with multiple nests in trees.
- Each nest is made of leaves stitched together with silk produced by their larvae.
- They reside in trees like mango, sal, jambu and jackfruit.
- Red Weaver Ants consist of three categories of ants – Workers, Major Workers and Queens.
- Workers and Major workers are mostly orange coloured with a size of 5-6 mm for workers and 8-10 mm for major workers with strong legs and large mandibles.
- Queens are larger in size with 20-25 mm and green-brown colour.
- They feed on small insects and other invertebrates like beetles, flies and hymenopterans. They do not sting but have a painful bite into which they can secrete irritant chemicals from their abdomens.

## **PRACTICE QUESTIONS**

### **MCQS**

**Q1. Which of the following statements are correct regarding 'Pineapple Express'?**

- It is a long, narrow region of water vapour in the atmosphere.
- It is a fruit train recently launched by India which has cold storage facilities.
- It refers to a local wind in Europe which is favourable for the growth of Pineapples.
- It is a cold and sub surface ocean current found beneath the Antarctic coasts.

**Q2. Consider the following statements regarding the Compressed Biogas (CBG):**

- It is a purified form of Biogas whereby hydrogen sulfide (H<sub>2</sub>S), carbon dioxide (CO<sub>2</sub>) and water vapours are removed.

- It has lower calorific value compared to Compressed Natural Gas (CNG).

- It is very corrosive in nature which makes it unsuitable to be used as fuel.

How many of the above statements given are correct?

- Only one
- Only two
- All three
- None

**Q3. Consider the following statements:**

- Countries in Central and South America are the largest producer and exporter of Cocoa in the world.
- Humid regions with a minimum of 90-100 mm rainfall per month are well suited for Cocoa production.
- Andhra Pradesh and Kerala account for nearly 80% of Cocoa production in India.

**GEOGRAPHY, ENVIRONMENT, BIODIVERSITY & DISASTER MANAGEMENT**

How many of the statements given above is/are correct?

- (a) Only one                      (b) Only two  
(c) All three                      (d) None

**Q4. Which of the following statements is/are correct regarding the Carbon Credit Trading Scheme (CCTS) of India?**

1. It takes into account the mandatory implementation for the 'obligated' entities but excludes voluntary markets.
2. It allows Indian companies to trade Carbon credit certificates in domestic as well as foreign markets.

Select from the correct answer from the pair given below:

- (a) 1 only                      (b) 2 only  
(c) Both 1 and 2                      (d) Neither 1 nor 2

**Q5. Consider the following statements regarding 'Kai Chutney'**

1. It is made with red weaver ants in Simlipal Tiger reserve.
2. Its GI tag has recently been accorded to Odisha.

Which of the above statements is/are correct?

- (a) 1 only                      (b) 2 only  
(c) Both 1 and 2                      (d) Neither 1 nor 2

## DESCRIPTIVE QUESTIONS

- Q1.** India's journey towards clean energy transition is fraught with few challenges. Discuss those challenge and suggest a way forward for India in this regard.
- Q2.** Roof top solar power generation form an important component in India's shift towards renewable energy. How far this can bring fruitful results for India?

**Answers:** 1-a, 2-a, 3-b, 4-d, 5-c



# SCIENCE & TECHNOLOGY

# GS PAPER (PRELIMS) & GS PAPER III (MAIN)

## ISRO'S CRYOGENIC ENGINE CE-20

#ASTRONOMY & SPACE TECHNOLOGY

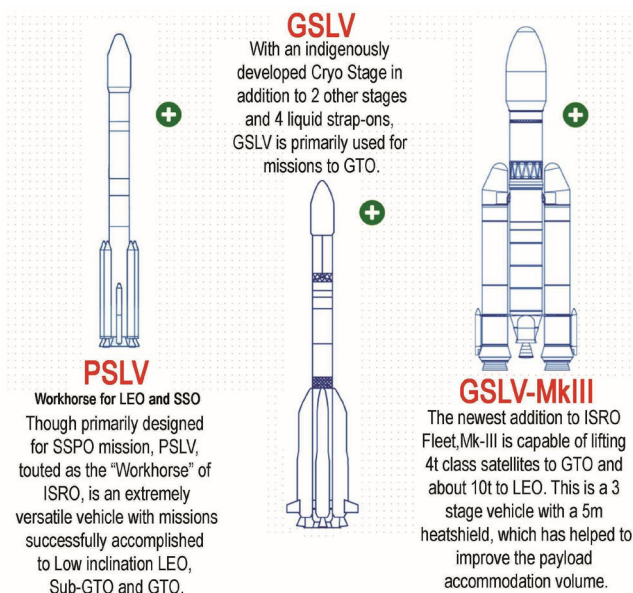
PRIMARY SOURCE THE HINDU

Indian Space Research Organisation (ISRO) has accomplished the human rating of its cryogenic engine (CE-20), which powers the cryogenic stage of the human-rated LVM3 launcher for India's first human space flight mission Gaganyaan.

- Human-rating refers to rating a system that is **capable of safely transporting humans**.

### GAGANYAAN MISSION

- Gaganyaan project envisages demonstration of human spaceflight capability by launching a **crew of three members to an orbit of 400 km** for a three-day mission, and bring them back safely to the Earth, by landing in the sea.
- Launcher:** Launch Vehicle Mark-3 (LVM3/ GSLV Mk III).



### THREE LAUNCH VEHICLES OF ISRO

#### 1. Polar Satellite Launch Vehicle (PSLV):

- PSLV is an expendable launch vehicle developed and operated by ISRO since its first successful launch in 1994.
- The **workhorse of the Indian space program** is known for its reliability, versatility, and cost-effectiveness.
- It is **primarily used** to launch satellites into polar orbits, although it can also be used for launching satellites into **geostationary transfer orbits**.
- Stages: Four-stages launch vehicle** that uses a combination of solid and liquid propellants.
  - First stage is powered by a solid rocket motor
  - Second stage uses a liquid propulsion system.
  - Third stage is a solid rocket motor
  - Fourth stage is a liquid-fuelled engine.
- It has been **used for launching a wide range of payloads**, including Earth observation satellites, navigation satellites, communication satellites, and scientific payloads for various domestic and international customers.
- It has a **successful track record** with numerous launches, including the Chandrayaan-1 mission (2008) and Mars Orbiter Mission/Mangalyaan (2013).

#### 2. Geosynchronous Satellite Launch Vehicle (GSLV):

- GSLV is one of the **three main rockets** used by ISRO for carrying its satellites, the other two being PSLV and LVM3 (earlier called GSLV-MkIII).
- Stages: Three-stage launch vehicle.**
  - First Stage:** Uses four strap-on **solid boost motors** (HS200) each carrying 127 tonnes of propellant. Provides the initial powerful thrust.
  - Second Stage:** Liquid core stage (L110) powered by two Vikas liquid engines using hypergolic propellants.
  - Third Stage:** Cryogenic Upper Stage (CUS) with cryogenic engine using liquid hydrogen and liquid oxygen for high specific impulse and efficiency.
- Specialises in placing **heavier satellites** (2,200 kg and above) into **Geosynchronous Orbits** (GEO), where they appear stationary relative to Earth. Ideal for **large communication satellites**. GSLV can carry more than

2,200 kg to geostationary orbits, and over 6,000 kg to low earth orbits.

#### Issues with GSLV:

- GSLV has had a **rather patchy track record**, because of which it has been described as the 'naughty boy'.
  - **GSLV** had flown 15 times before this, and four of these had been unsuccessful, a very high failure rate for any rocket.
  - **PSLV** has failed only twice in its 60 launches, including the first time it was tried way back in 1993.
  - **LVM3** rocket has flown 7 times and never failed.
- The problems have mainly been with the cryogenic engine used by GSLV that is **reverse-engineered on a Russian design**, which powers the third and final stage of the flight.

#### 3. Launch Vehicle Mark-3 (LVM3):

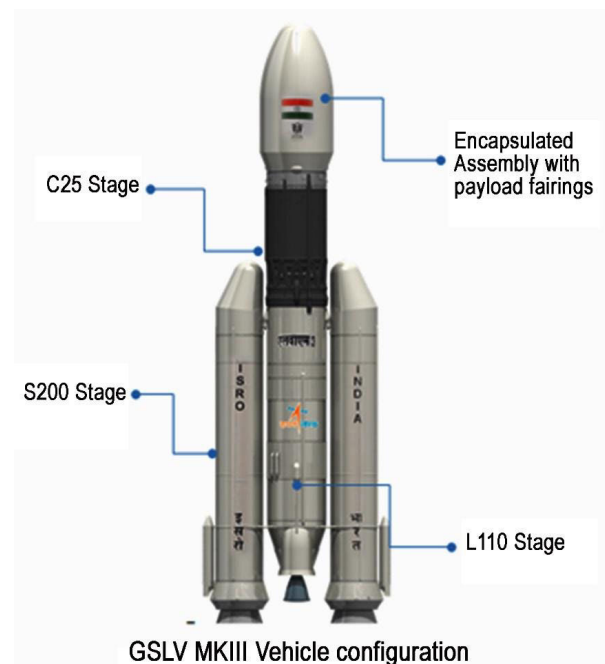
- LVM3 (previously referred as the Geosynchronous Satellite Launch Vehicle Mark III or GSLV Mk III) is a **three-stage medium-lift launch vehicle** developed by ISRO.
- **Stages:** GSLV Mk III is a **three-staged** launch vehicle.
  - **First stage-** Solid fuel S200 stage. Two rocket boosters use 200 tonnes of solid fuel to lift off the rocket.
  - **Second stage-** Liquid fuel L110 stage.
  - **Third stage-** Cryogenic fuel C25 stage uses 25 tonnes of a mixture of liquid hydrogen and liquid oxygen.
    - This upper stage, developed entirely in India, uses the **CE-20 cryogenic engine**.
    - This high-thrust engine burns liquid hydrogen and liquid oxygen at very low temperatures for exceptional efficiency and payload capacity.
- LVM3 is one of the **most powerful rockets in ISRO's fleet**.
  - **Payload capacity:**
    - 4,000 kilograms to geosynchronous transfer orbit (GTO).
    - 10,000 kilograms to low Earth orbit (LEO).
- **Primarily designed** to launch communication satellites into **geostationary orbit**. LVM3 has carried the Chandrayaan-2 and Chandrayaan-3 missions. It is also due to **launch crewed missions** under Gaganyaan Mission.

#### ISRO's CE-20 engine:

- ISRO has used **three cryogenic engines** over the years: KVD-1, CE-7.5, and CE-20. The last two are India-made, although the design of the CE-7.5 is based on the

KVD-1, which Russia (as the Soviet Union) supplied to India in the early 1980s.

- The **GSLV Mk II launch vehicle uses CE-7.5 engines** to power the third stage of its ascent.
- CE-20 is an **indigenous cryogenic engine** ISRO developed to use with the GSLV Mk III (LVM3 launch vehicle). It represents an improvement on the CE-7.5 cryogenic engine.
  - **Fuel:** Liquid hydrogen and liquid oxygen as propellants stored at **extremely low temperatures** (around -253°C for hydrogen and -183°C for oxygen).
  - While the **CE-7.5 engine is lighter and sports higher fuel-use efficiency**, the CE-20 engine **achieves a higher maximum thrust** (~200 kilonewton versus 73.5 kilonewton) with a shorter burn duration.



GSLV MKIII Vehicle configuration

#### **HYDROGEN A DESIRABLE FUEL FOR ROCKET MOTOR**

- Liquid fuels are preferred for rocket motors because they are **less bulky and flow better than solid fuels**.
- Using hydrogen as fuel is also desirable because when it is combusted, it generates the **highest exhaust velocity**. For example, combusting hydrogen with oxygen as the oxidiser results in an exhaust velocity of 4.5 km/s whereas that produced by unsymmetrical dimethylhydrazine and nitrogen tetroxide — the combination used by the second stage of the PSLV rocket, E.g., — is around 3.4 km/s. This is **why hydrogen is a desirable fuel for rocket motors**.

**CRYOGENIC ENGINES USED IN ROCKETS**

- **High specific impulse:** Cryogenic propellants have a **high energy density**, i.e., they pack a lot of energy in a small amount of mass and have high specific impulse. **High specific impulse** means **more thrust per kilogram of propellant** (High thrust to weight ratio). This allows **rockets to carry less fuel**, reducing their overall weight and allowing them to carry heavier payloads or travel further. Higher thrust is beneficial for:

- **Overcoming Earth's gravity:** Launching a rocket out of Earth's gravity well requires immense thrust. Cryogenic engines provide the necessary power to achieve this initial escape velocity.
- **Manoeuvring in space:** Once in space, cryogenic engines allow for precise manoeuvring and course corrections due to their high thrust and controllability.
- **Throttling Capability:** Cryogenic engines are designed to be throttleable, i.e., they have the ability to vary or **adjust their thrust levels** during flight. This capability is essential for precise control during ascent, orbit insertion, manoeuvring, controlled re-entry and other critical phases of a rocket's journey.
- **Greater fuel efficiency:** The combustion process in cryogenic engines is cleaner and more complete, releasing more energy and generating more thrust. Rockets with cryogenic engines **need less fuel** to achieve the same results, making them more **cost-effective**.

**Challenges:**

- **Complexity:** They require complex and expensive infrastructure to store and handle extremely cold propellants. **E.g.**, Hydrogen in liquid form needs to be maintained at -253 degrees C (and the liquid oxygen at -184 degrees C) and leaks very easily.
- **Cost:** The initial development process of cryogenic engines and their maintenance is generally more expensive than other types of engines.

## KULASEKARAPATTINAM SPACEPORT

#ASTRONOMY AND SPACETECHNOLOGY

PRIMARY  
SOURCE

BusinessLine

*The foundation stone for India's new spaceport for small satellite launch vehicles was laid at Kulasekarapattinam, Tamil Nadu.*

**KULASEKARAPATTINAM SPACEPORT**

- **Location:** Thoothukudi district, southern Tamil Nadu. Spread **across 2,233 acres** in Padukkapathu, Pallakurichi, and Mathavankurichi villages in Kulasekarapattinam and Sathankulam taluks.
- **Will launch:** Smaller payloads like Nano and Microsatellites.
- **Project cost:** ₹950-crores, expected to take **nearly two years** to complete.
- India has **Satish Dhawan Space Centre in Sriharikota, Andhra Pradesh** spread over 145 sq. km. that has two launch pads for PSLV and GSLV flights (heavier satellites).

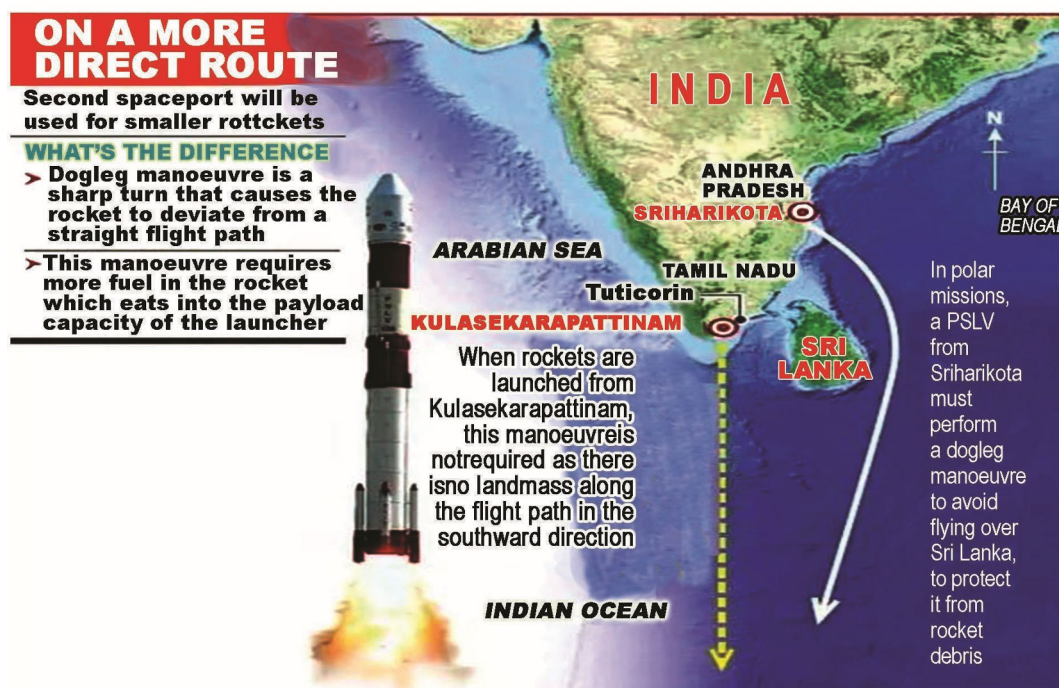
**CONSIDERATIONS FOR SELECTING A ROCKET LAUNCH SITE IN INDIA****1. Proximity to Equator (Provides initial boost, saves cost):**

- When seen from the North Pole, **Earth rotates counterclockwise** (West to East). The **surface velocity of rotation** varies from point to point on the Earth.
  - It is about 1600 km per hour or about 465 metres per second near the equator.
  - The **velocity gradually reduces** as we move to the poles and is **practically zero at the poles**.
- A satellite launched from the **sites near the equator towards the east direction** will get an **initial boost equal to the velocity of the Earth surface**. The initial boost helps in **cutting down the cost of rockets** used to launch the satellites.
  - However, this benefit can be taken only for such satellites which are placed in **geo-stationary orbit or which circle the Earth parallel to the equator**. Such satellites are usually communication satellites or satellites used for scientific research such as the International Space Station.
  - **Polar satellites** (placed in polar orbits moving across the equator in north south direction) are generally launched in southward or northward direction and therefore cannot take advantage of the Earth's rotation.

**2. Location on Eastern coast (Safety considerations):**

- Launching stations are generally located near the eastern coastline so that, just in case of failure of the launch, any debris of the satellite falls harmlessly in Bay

of Bengal or Indian Ocean and does not fall on the main hinterland.



#### STRATEGIC ADVANTAGE OF KULASEKARAPATTINAM

- The geographical location of Kulasekarapattinam has a **strategic advantage** over launch pads in Sriharikota.
- During polar missions, big launch vehicles follow a trajectory where they fly in the **southeast direction** after lift-off from Sriharikota to avoid flying over Sri Lanka, protecting the landmass from rocket debris.
- The **rocket then takes a sharp manoeuvre** and proceeds towards the **south pole**. This manoeuvre results in the rocket deviating from a straight flight path **requires more fuel** that results in loss of rocket's payload capacity.
  - Payload loss in big launch vehicles is manageable, But for small satellite launch vehicles, such manoeuvres will leave minimal payload capability.
- Kulasekarapattinam gives the benefit of **launching straight in the southward direction, i.e., manoeuvre is not required**, thereby, **saving the rocket's fuel** and improving payload capability.

#### Significance:

- By the establishment of the new spaceport, India seeks to **leverage the private sector in making it a self-reliant spacefaring nation**. The global market for small satellites is projected to have a CAGR of 16.4% — from \$3,215.9 million in 2020 to \$13,711.7 million by 2030. By allowing easier access to polar orbits, the location will help make **launches cheaper for both**

**private players and Indian Space Research Organisation (ISRO).**

- In 2020, Central Government **permitted private companies to enter the space sector**, which was hitherto under the complete control of ISRO.
- Central Government has allowed up to **100% FDI** in the space sector.
- **Indian Space Policy 2023** aims to enable ISRO to focus on scientific space missions rather than routine activities like weather and communication satellite launches. It allows satellite launches by non-government entities (NGEs), subject to technical feasibility and range safety.

#### SMALL SATELLITE LAUNCH VEHICLE (SSLV)

- SSLV is the new small satellite launch vehicle developed by ISRO to cater the launch of small satellites **up to 500 kg to Low Earth Orbits** on 'launch-on-demand' basis.
- It is a **3 stage Launch Vehicle** configured with **three Solid fuel Propulsion Stages**. It has a liquid propulsion-based Velocity Trimming Module (VTM) as a terminal stage.
- SSLV is capable of launching **Mini, Micro, or Nanosatellites** (10 to 500 kg mass) to a **500 km orbit**. It provides low-cost access to Space, is capable of **multiple orbital drop-offs** allowing it to launch multiple microsattellites in one launch.



- This rocket can be assembled and shifted to the launch pad in **just over 72 hours**, compared to ISRO's Polar Satellite Launch Vehicle which takes around three months.

## ASTRONOMERS FIND SMALL HOT HELIUM STARS

#ASTRONOMY AND SPACE TECHNOLOGY

PRIMARY  
SOURCE THE HINDU

*Astronomers have finally found a unique class of stars (Helium stars) that had been theoretically predicted earlier.*

### HOW DO STARS SUSTAIN?

- Stars are **giant balls of hot gas**, mostly hydrogen, with some helium and small amounts of other elements. Every star has its own life cycle, ranging from a few million to trillions of years, and its properties change as it ages.
- Newton's law of gravity says all objects with mass attract each other. This should mean the Sun's outer and inner layers should be attracted to each other, so the **star should continuously fall inwards**, and eventually simply collapse. However, the sun does not collapse as the **nuclear fusion** prevents the Sun from shrinking.
  - In the heart of the star, **two hydrogen nuclei** (protons) ultimately **combine to form one helium nucleus**, releasing enormous amounts of heat and energy in the form of gamma rays and neutrinos (Nuclear Fusion).
- While gravity pulls in, this fusion energy pushes the star out, and **maintains the star in a state of equilibrium**. Such stars are said to be in the **main sequence**.



### HYDROGEN-DEVOID STARS (HELIUM STARS)

- When a star no longer fuses material and allows gravity to gain the upper hand, it blows up in an **explosion called a supernova** when it is massive enough.

- The **light from supernovae contains signatures of the various elements** it has passed through near the dying star's surface.
- Scientists have observed that **some supernovae have shown no signs of hydrogen**. (Hydrogen, the lightest of elements, makes up the outer layers of main-sequence stars). The only explanation is that the **outer layers of some stars are stripped away before the supernova explosion**.
- Many binary systems start out with **two main sequence stars**. The **gravitational attraction of one star can peel away the hydrogen layer off the other**, resulting in **one helium star** and one main sequence companion. (Two stars in a **binary system** orbit each other. Most stars heavier than the Sun are in such binaries).
- **Helium stars** are Hydrogen depleted stars. They have a **core of helium** and their outer layers are stripped of Hydrogen.
  - They are roughly **8-20 times the mass of our Sun** and their surface **gravity is about 1,000-times that of the earth**.
  - Helium stars are expected to be so hot that they emit more of their energy as **ultraviolet radiation**, which lies beyond the visible range.
  - These Helium stars will **end their lives as hydrogen-poor supernovae** that leave behind ultra-dense balls called **neutron stars**. And these neutron stars may ultimately smash into each other in **powerful kilonova explosions**, releasing gravitational waves.

## LIKELY SOURCE OF ZODIACAL DUST IDENTIFIED

#ASTRONOMY AND SPACE TECHNOLOGY

PRIMARY  
SOURCE THE HINDU

*A study published by the Royal Astronomical Society points out that the likely **source** of the mysterious zodiacal dust has been identified, and it has martian origin.*





A column of zodiacal light stretches skyward beyond Mount Teide in the Canary Islands. New research suggests that the interplanetary dust that causes this phenomenon may have Martian origins. Credit: StarryEarth, CC BY-NC 2.0.

### ZODIACAL LIGHT

- Zodiacal light is the **faint glow** visible on completely dark nights from Earth. It is due to the **sunlight scattered by interplanetary dust** (Zodiacal dust).
- Zodiacal light is present across the entire ecliptic path, which is the path along which the Sun moves in the sky over the course of a year.

### MAJOR HIGHLIGHTS OF THE STUDY

- Scientists at the Physical Research Laboratory in Ahmedabad examined the data from the **Juno spacecraft's** encounter with dust particles between 1 and 5 astronomical units (AU) from the Sun. They **found a peak in dust particle flux at 1.5 AU**, suggesting a significant concentration of dust in that region.
  - AU stands for 'astronomical unit', which is the distance between the earth and the Sun. Mars is at a distance of 1.52 AU and Jupiter at 5.2 AU from the Sun.
  - Juno is a spacecraft that NASA launched in 2011 to study the gas-giant Jupiter and its moons.
- By comparing the **flux of dust near Mars** and the number of particles escaping Mars's moons, **Deimos and Phobos**, the researchers concluded that **these moons could be a major source of the interplanetary dust responsible for zodiacal light**.
  - Mars's two moons are called Deimos and Phobos. Phobos is the bigger of Mars's two moons.
- The **low gravity of Deimos and Phobos** allows smaller dust particles to easily escape into space. The smaller of these dust particles escape into space, while the

**larger particles are pulled in by Mars's gravity**, leading to the formation of a dust ring around the planet.

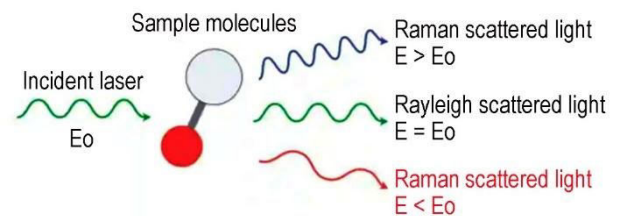
## RAMAN EFFECT

#FUNDAMENTAL SCIENCE

PRIMARY SOURCE THE HINDU

28<sup>th</sup> February is celebrated as the National Science Day in India to mark the discovery of Raman Effect by Dr. C V Raman on 28<sup>th</sup> February 1928, for which he was endowed with the Nobel Prize in Physics in 1930.

### Scattering of light by molecules



### SCATTERING OF LIGHT

- Scattering of light is a phenomenon where light waves travelling through a medium (like air or water) interact with particles in the medium and are **redirected in various directions**. These particles can be molecules, atoms, or even dust particles.
- The scattering of light is responsible for many of the beautiful and everyday phenomena. **E.g.,** Blue colour of the sky, Red colour of sunrises and sunsets, White colour of clouds, twinkling of stars.

#### The scattered light can be:

- **Elastic** (Rayleigh Scattering), the energy released is at the same frequency as that of the incident radiation.
- **Inelastic** (Raman Scattering), the energy released is at a higher or lower frequency than that of the incident radiation.

#### Raman Effect:

- Raman effect or Raman scattering is a phenomenon in which light interacts with a molecule and the **wavelength of the light changes**.
  - The light interacts with the molecule, causing it to vibrate. The molecule absorbs some of the energy

from the light and emits light of a **different wavelength**.

- The difference between the wavelength of the incident light and the wavelength of the scattered light is the **Raman shift**.
- This change in wavelength or Raman shift is **specific to the molecule that the light interacts with**. (Raman shift is akin to the fingerprint of the molecule that scattered the light).
- **Raman spectroscopy** is a technique that measures the Raman shift to identify the molecule in a given sample and learn about its structure and composition.

#### APPLICATIONS OF RAMAN EFFECT/ RAMAN SPECTROSCOPY

- **Material Science:** It offers a non-destructive approach for analysing the molecular compositions and structures of a wide range of materials. It can be used for material characterisation, identification of polymorphs, detection of impurities etc.
- **Pharmaceutical Analysis:** Enables identification of active ingredients, detection of counterfeit drugs, quality control, analysis of drug delivery systems and pharmaceutical research.
- **Forensic Science:** Assists forensic scientists in identifying and characterising trace evidence, such as fibres, paints, and drugs.
- **Environmental Monitoring:** Employed for environmental analysis, including identification and quantification of pollutants, monitoring water quality, and analysis of atmospheric particulates.

## CONTRIBUTIONS OF SATYENDRA NATH BOSE

#ACHIEVEMENTS OF INDIANS IN SCIENCE

PRIMARY  
SOURCE

THE HINDU

#### SATYENDRA NATH BOSE

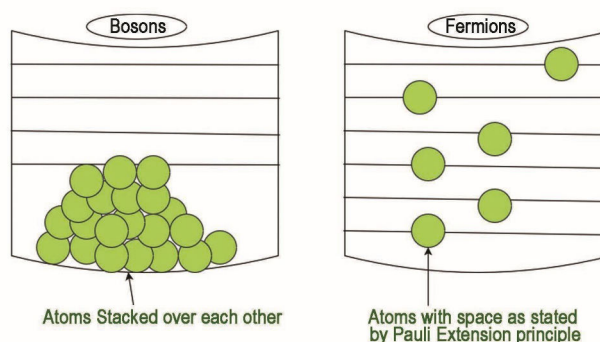
- Satyendra Nath Bose (1894-1974) was an Indian physicist who made significant contributions to the **field of theoretical physics**, particularly in the area of quantum mechanics and statistical mechanics.
- His ground-breaking work laid the foundation for the **development of Bose-Einstein statistics** and the theoretical prediction of a **new state of matter known as Bose-Einstein condensate**. His contributions

helped in improving the Standard Model of Particle Physics and later on discovering the Higgs Boson (God Particle).

#### BOSE'S MAJOR CONTRIBUTIONS

##### 1. Foundation for Bose-Einstein Statistics and Bosons:

- Bose derived a new explanation for **Planck's law of black-body radiation in 1924**, solely using principles of quantum mechanics (light as quanta). This work led to the concept of "**Bose-Einstein statistics**," which describes a different class of particles called "bosons."
- Bose-Einstein Statistics describes the **behaviour of particles (bosons) that have integer spin**, such as photons and atoms, and predicts that they tend to occupy the same quantum state.
  - Fundamental particles can be in **one of two categories** depending on how they follow certain statistical rules (i.e. their probability of occupying a certain energy level): **bosons or fermions**.
  - Bosons, named after him, have distinct behaviour compared to other particles known as "fermions" (e.g., photons vs. electrons). Bosons **can occupy the same quantum state simultaneously**, unlike fermions, which obey the Pauli exclusion principle.
- Bose-Einstein statistics were crucial in **understanding the behaviour of particles at low temperatures** and **led to the prediction of the Bose-Einstein condensate**.



##### 2. Bose-Einstein Condensate:

- Bose's work on statistical mechanics, in collaboration with Einstein, led to the **prediction of a new state of matter** called the Bose-Einstein condensate (BEC).
- According to Bose-Einstein statistics, at very low temperatures, a **significant number of bosons can accumulate in the lowest energy state**, forming a condensate.
  - Sometimes referred to as the '**fifth state of matter**', a BEC is a state of matter created when particles,

called bosons, are cooled to near absolute zero (-273.15 degrees Celsius).

- At such low temperatures, due to insufficient energy, the whole group of particles condenses to share the same quantum state/ energy level, effectively becoming a **single 'super-particle' cloud**.
- Bose-Einstein condensation was **experimentally observed** in 1995, several decades after Bose's theoretical prediction, and earned Eric Cornell, Carl Wieman, and Wolfgang Ketterle the Nobel Prize in Physics in 2001.

## ROOM TEMPERATURE QUBITS DEVELOPED USING METAL ORGANIC FRAMEWORK

#QUANTUM COMPUTING

PRIMARY SOURCE THE HINDU

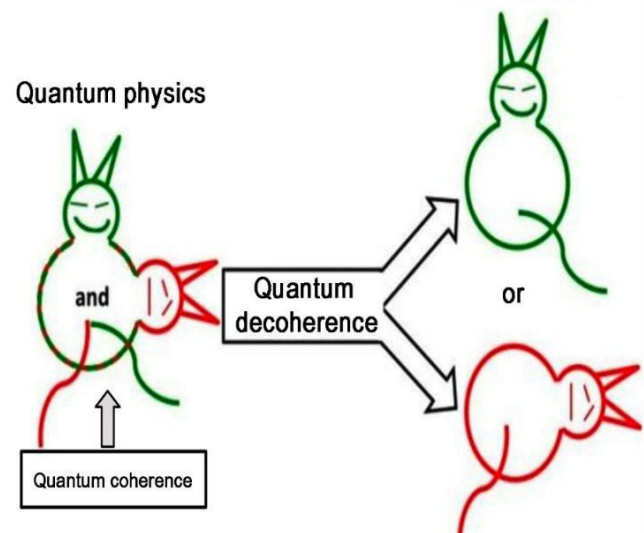
A group of scientists in Japan have **achieved quantum coherence at room temperature** by embedding a chromophore in a metal-organic framework. This development gives **hope to lower the costs of qubits** and make quantum computers accessible.

### QUANTUM COMPUTERS AND QUBITS

- Quantum computers are machines that use the properties of quantum physics to store data and perform computations. They **use qubits** as their basic units of information.
- **A qubit can be:**
  - a particle — like an electron, photon
  - a collection/group of particles, or
  - any quantum system engineered to behave like a particle.
- Any particle that can be **controlled and manipulated using quantum-mechanical phenomena can be used as an information unit** in a quantum computer. **E.g.**, Linear optical quantum computing uses photons (the particles of light) as qubits.
- The **premise of quantum computing** is that **information can be 'encoded' in some property of the particle** (like an electron's spin) and then

processed using these peculiar abilities. As a result, quantum computers are expected to perform complicated calculations that are out of the reach of the classical and even the best supercomputers of today.

### How is the cat?



### QUANTUM COHERENCE

- This is a special state where a quantum system can **exist in multiple states simultaneously (superposition)**, unlike classical bits in computers which are restricted to 0 or 1. This property is crucial for performing calculations in quantum computers.

#### The Challenge:

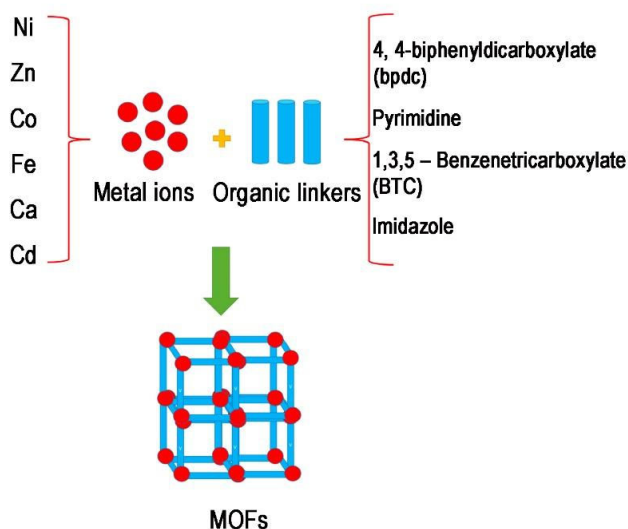
- **Maintaining quantum coherence is difficult** because the **superpositions between qubits are fragile**. This fragility arises out of the interaction between qubit and their environment leading to **decoherence**.
- Decoherence is a major challenge for quantum computing, as it causes **qubits to collapse into one of the two states** and **lose quantum information**. Decoherence can be caused by various factors, such as noise, heat, and measurement.
- Previously, quantum coherence could only be achieved at **extremely low temperatures**, around -196°C (liquid nitrogen temperature). This makes building practical quantum computers challenging.

#### The Breakthrough:

- Researchers were able to achieve coherence at room temperature by embedding a **light-absorbing molecule called a chromophore** within a **metal-organic framework (MOF)**, using Zirconium **as the metal component**. In this experiment, the chromophore was a **pentacene-based molecule**.
- The MOF's structure restricts the movement of the chromophore, minimising environmental disturbances. This **allowed the chromophore to maintain quantum coherence** for a brief period in the nanosecond range (billionths of a second) at room temperature. However, this breakthrough offers a promising path forward for realising the potential of quantum technologies.

**KEY TERMS****Chromophore:**

- A chromophore is a molecule in a given material that absorbs particular wavelengths of visible light, and emits colour as a result, and in doing so **confers colour on the material**.

**METAL ORGANIC FRAMEWORK (MOF)**

- MOF is a type of porous material that consists of a **network of repeated molecular arrangements** where the repeating structure has a **metal atom or ion** with organic molecules attached to its like tentacles. Each tentacle attaches to another metal atom and the structure repeats itself to make up the MOF.
- MOFs have **various applications** in fields such as gas storage, catalysis, and sensing, due to their high

surface area, tunable structure, and functional properties. MOF can also be used for quantum computing, as **they can host qubits within their pores** or on their surfaces.

## SUSTAINABLE CARBON NANOTUBE

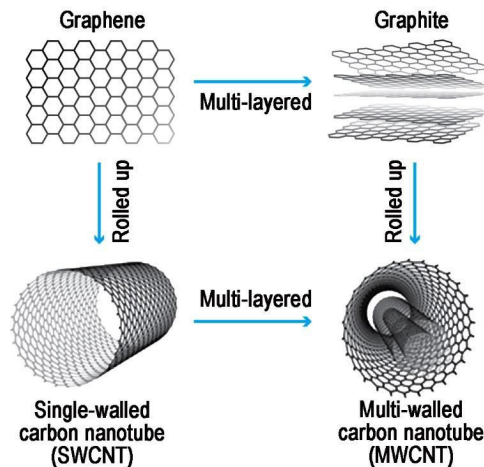
#NEW EMERGING TECHNOLOGIES

PRIMARY SOURCE THE HINDU BUSINESS LINE

*A novel method for synthesising carbon nanotubes directly on glass substrates at 750°C has been developed by the researchers at the Institute of Advanced Study in Science and Technology (IASST).*

**ABOUT CARBON NANOTUBES (CNTS)**

- CNTs are **allotropes of carbon** with a cylindrical shape and diameter in the nano-metre range (nanoscale).
- CNTs are composed of **carbon atoms linked in hexagonal shapes**, with each carbon atom covalently bonded to three other carbon atoms.



- **Single-walled carbon nanotubes (SWCNTs):**
  - Have diameters around 0.5–2.0 nanometres.
  - About 100,000 times smaller than the width of a human hair.
- **Multi-walled carbon nanotubes (MWCNTs):**
  - Consist of nested single-wall carbon nanotubes in a nested, tube-in-tube structure.
  - Double- and triple-walled carbon nanotubes are special cases of MWCNT.



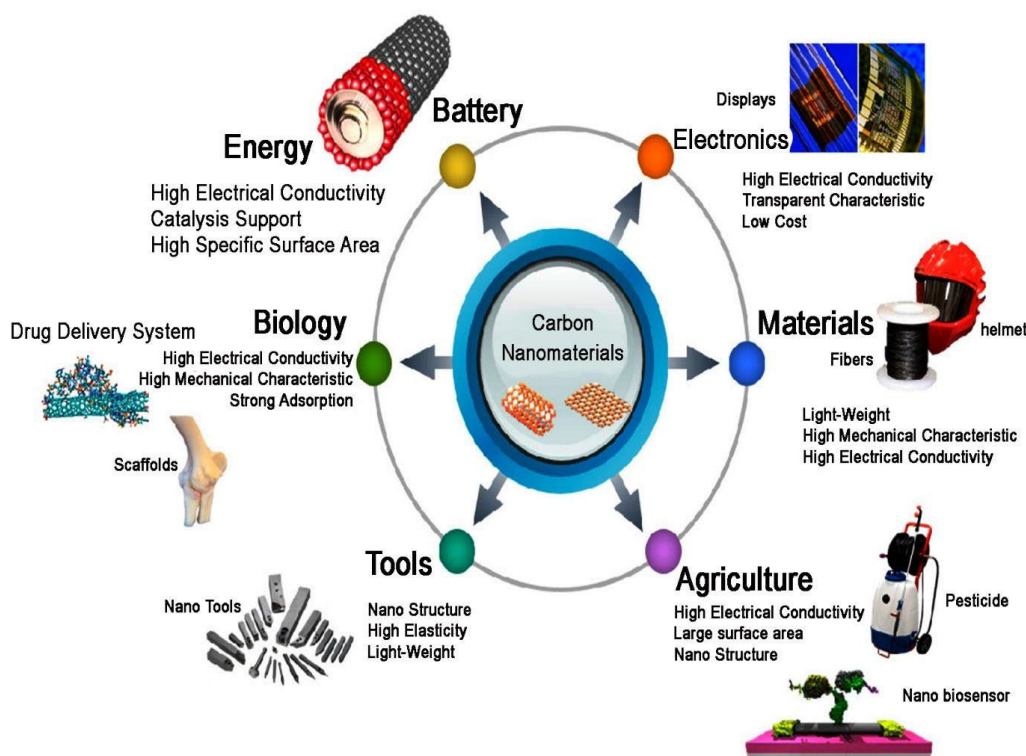
### PROPERTIES AND APPLICATIONS OF CNT

CNT has wide-ranging implications in the fields of energy research, biomedicine and optoelectronics, rechargeable batteries, flexible electronics, aerospace, transparent electrodes, touchscreens, supercapacitors etc.

- **High strength:** CNTs are even stronger than steel, but with much lower density which makes them lightweight and suitable for applications in aerospace and automotive engineering.
- **High electrical conductivity:** Some CNTs are metallic conductors, while others are semiconducting. This makes them versatile for use in a wide range of

electronic devices, such as transistors, sensors, and solar cells.

- **High thermal conductivity:** CNTs are excellent conductors of heat and chemically stable which makes them ideal for heat dissipation applications, such as in heat sinks and thermal management devices.
- **Large surface area:** CNTs have a very large surface area for their size which makes them ideal for applications in catalysis. Its hollow, tubular structure makes it ideal as a **storage box** and can be used in energy storage, drug storage and drug delivery.



### CONVENTIONAL METHODS OF SYNTHESISING CNT

- The process requires **high temperatures of 1,000° C** and **metal catalysts** such as **iron, cobalt and nickel**, which **pose biocompatibility concerns** for biomedical applications.
- Without these catalysts it is costlier to produce CNTs, so there was a need to develop a cleaner, more sustainable manufacturing process.

### SUSTAINABLE CNT

- The newly developed method involves using a **plasma-enhanced chemical vapour deposition** technique (**PECVD**), where plasma is generated using a specially designed spiral fused hollow cathode source. **Sodium**

among all the elements within the glass, emerges as the primary catalyst for initiating CNT growth.

- **Significance:**
  - Using **plasma at 750°C** instead of 1,000°C, **reduces energy consumption** and material damage.
  - **Leveraging sodium** already present in the glass substrate as primary catalyst, **removes the need for transition metal catalysts** and **addresses biocompatibility concerns**.
  - Since the process is **operational at atmospheric pressure** which makes it more **cost-efficient** compared to conventional methods.



# HIGH ALTITUDE PSEUDO SATELLITES

#NEW EMERGING TECHNOLOGIES

PRIMARY  
SOURCE

The Indian  
EXPRESS

The Bengaluru-based National Aerospace Laboratories successfully flew a prototype of a new-generation unmanned aerial vehicle (UAV) called High Altitude Pseudo Satellites (HAPS).

## ABOUT HIGH ALTITUDE PSEUDO SATELLITES

- HAPS are **unmanned air vehicles** that can fly at an altitude of 18-20 km from the ground (stratosphere), almost double the heights attained by commercial aeroplanes.
- HAPS have the ability to **generate solar power**, so they can **remain in the air for months and even years**, giving the advantage of a satellite.
- They move at about **80-100 km per hour** at a height of 20 km above the Earth's surface. These features help it to **gauge an area for a long time**. They can easily keep an eye over 200 km and can observe everything even over a 400 sq. km area with 5 cm resolution.

## MEET HAPS – INDIA'S VERY OWN UNMANNED AERIAL VEHICLE

Can fly 20 km high  
Can float for months  
Solar-powered "pseudo satellite"  
Increases surveillance and monitoring capabilities

Cost significantly lower than satellites

23-kg prototype with a 12-metre wingspan

Tested for 8.5 hours reaching 3 km altitude

Aiming for 24-hour flight test to evaluate power generation

Deployment target by 2027

Useful for continuous surveillance of border areas

1<sup>st</sup> test flight of a prototype was conducted last week

Can aid in disaster situations and provide mobile communications networks

Developed by National Aerospace Laboratories, Bengaluru

Aims to enhance India's high-endurance, high-altitude capabilities

Potential for industrial production post further development milestones

- HAPS can work like a geostationary satellite and can be **easily redeployed over another location, or can be reequipped with a different payload**.

- The **primary utility of HAPS vehicles** is in the field of surveillance and monitoring, but it can be also useful in disaster management, emergency/public safety communications, maritime surveillance, land border control applications, etc.

# NEWFOUND 'OBELISKS'- AN UNUSUAL LIFE FORM

#BIOLOGY & BIOTECHNOLOGY

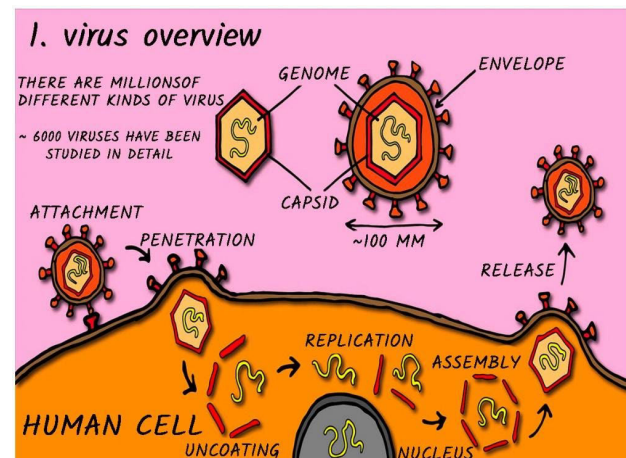
PRIMARY  
SOURCE

THE HINDU

Scientists at Stanford University have reported an extremely simple and unusual form of life using **next-generation sequencing**. When analysing genetic material from bacteria present in the human gut and oral cavity, the scientists have identified a new form of life **lying between viruses and viroids** on the scale of simplicity. They have been termed as **'obelisks'**.

## VIRUSES

- Viruses are the **organisms at the boundary between the living and the non-living**. Viruses are **inert**, meaning they are inactive and non-replicating, outside a host cell.
- Unlike living cells, viruses **do not have a complex cellular structure**. They are **composed of a protein coat (capsid)**, and in some cases, a lipid (fat) layer outside that coat **and genetic material (either DNA or RNA)**.

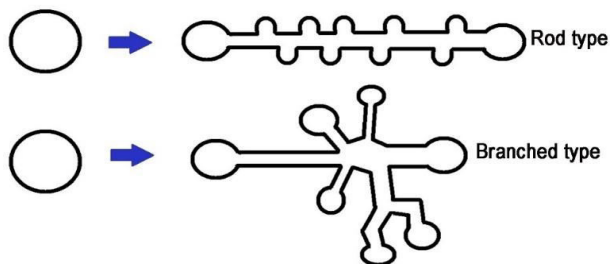


- Viruses cannot maintain a stable internal environment (homeostasis) like living organisms. They cannot reproduce, metabolise, or respond to stimuli on their own, and are **dependent on the host cell for their metabolic activities**.

- 'Viruses' infect a host cell, **use the cell's machinery to make more copies of themselves**, then infect a new cell to repeat the cycle.

### VIROIDS

- Viroids are **even smaller and simpler than viruses**. They are **infectious agents** that consist solely of a **single-stranded, circular RNA molecule**, without a protein coat.
- However, viroids have **one important distinction from Viruses**. Usually, genetic material contains a code that tells cells how to make various proteins. But the **RNA of viroids do not code for any protein**. (They are just small pieces of RNA that serve no function apart from propagating themselves).
- Viroid RNA is tiny (**250-400 base nucleotide pairs** versus a few thousand in RNA viruses). They primarily infect plants, **causing a variety of diseases** characterised by stunted growth, leaf distortion, and other symptoms.
- They are **transmitted** through various means, including mechanical transmission via contaminated tools, seed transmission, pollen, and insect vectors.  
**Examples:** Potato spindle tuber viroid, Citrus exocortix viroid, and Coconut cadang-cadang viroid.



### OBELISKS

- Obelisks and viroids, both have **circular RNA** for genomes. However, the obelisk RNA is much longer (around a **thousand base pairs**) and appears to **code for two proteins**, neither of which bear any similarity to any known protein from any other life form.
- Research is being continued to answer some questions regarding obelisks, like how do they make copies of their genome? How do they transmit? Are they pathogenic to bacteria? How did they evolve? Do they have roles to play in human health and disease?

## KALA AZAR

### #HEALTH

PRIMARY SOURCE The Indian EXPRESS

*In a significant step forward towards eliminating Kala Azar, India has achieved the target of **reporting less than one case per 10,000 population across all blocks** in 2023. (633 blocks, mainly in four states Bihar, Jharkhand, West Bengal and Uttar Pradesh, where the disease was endemic).*

- For eradicating the parasitic disease, India has to **keep case count below 1 per 10,000 population** in all blocks for two more years.

## Leishmaniasis

Information for internally displaced persons and refugees

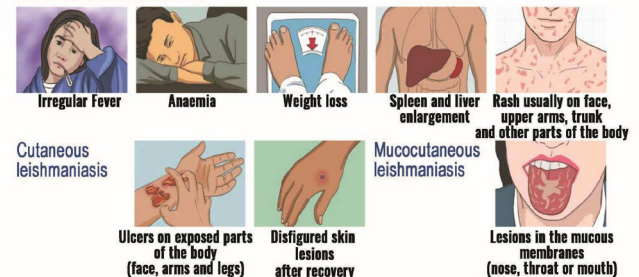
**Source of infection**

Vector-borne disease transmitted through the bites of infected female phlebotomine sandflies, which feed on blood to produce eggs.

## Symptoms

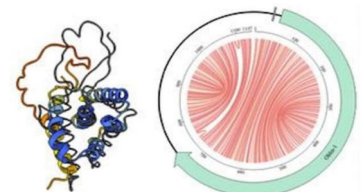
Visceral leishmaniasis

Leishmaniasis has three forms: visceral (Kala-Azar, most serious form); cutaneous (most common); and mucocutaneous. Depending upon its type it can be fatal. Symptoms include:



### ABOUT KALA AZAR

- Visceral leishmaniasis or kala-azar is a slow progressing Neglected Tropical Disease caused by a protozoan parasite of **genus Leishmania**.
- The zoonotic infection is transmitted by the **sand fly** (a blood-sucking pest) found in moist (humid) mud and sand close to livestock.
- The parasite primarily infects the **reticuloendothelial system** and may be found in abundance in bone marrow, spleen and liver.
- **Signs and symptoms:** Fever, weight loss, fatigue, anaemia, and enlargement of the liver and spleen.
- **Occurrence:** It is the **second-largest parasitic killer in the world** after Malaria. Mainly affects poor people in Africa, Asia and Latin America,



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and is associated with malnutrition, population displacement, poor housing, weak immune system and lack of financial resources.

- It is **treatable** and requires a medical diagnosis. If left untreated, the fatality rate in developing countries is over 95%.
  - Some of the kala-azar cases manifest as **Post Kala-azar Dermal Leishmaniasis (PKDL)** after a few years of treatment.
  - **PKDL** is a condition when Leishmania invades skin cells, resides and develops there and manifests as dermal lesions.

#### NATIONAL KALA-AZAR ELIMINATION

India's National Health Policy (2002) envisaged kala-azar Elimination by 2010, which was later extended to 2015, 2017, and then 2020. Now, Kala-azar is targeted for elimination by **2023** through World Health Organisation's Neglected Tropical Disease RoadMap goal is 2030.

## GUINEA WORM DISEASE

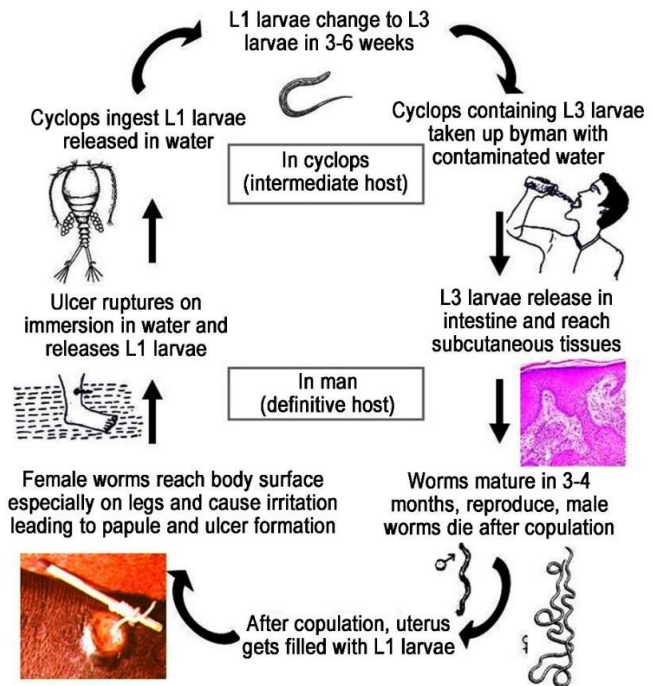
#HEALTH

PRIMARY SOURCE THE HINDU

*The world is on the brink of eradicating Guinea worm disease. There were more than 3.5 million cases of this disease in the 1980s, but according to the latest World Health Organisation's (WHO) epidemiological report, there were just 14 cases in 2021, 13 in 2022, and 6 in 2023.*

#### ABOUT GUINEA WORM DISEASE

- Also known as dracunculiasis, it is a **neglected tropical disease** caused by the **parasitic worm Dracunculus medinensis**.
- It is **transmitted through drinking contaminated water** containing copepods, tiny crustaceans that serve as intermediate hosts for the worm larvae.
- **Symptoms:** Painful blister formation usually on the legs or feet from where the adult female worm emerges (around 1 metre long). Sometimes, secondary bacterial infections occur at the wound.
- **Treatment:** Slow and careful extraction of the worm.
- **Prevention:** Access to safe drinking water and education about hygiene practices.



- **Eradication in India:** India eliminated Guinea worm disease in the 1990s through a rigorous campaign of surveillance, water safety interventions, and education. India received Guinea worm disease-free certification from the WHO in 2000.

## KYASANUR FOREST DISEASE

#HEALTH

PRIMARY SOURCE THE HINDU

*Two casualties were reported in Karnataka due to Kyasanur Forest Disease (KFD), a viral infection.*

#### ABOUT KYASANUR FOREST DISEASE

- KFD is a **tick-borne viral haemorrhagic fever** endemic to the South-western part of India. The disease is caused by a virus belonging to the family Flaviviridae.
- The disease was **first noticed in the Kyasanur Forest area** in Shivamogga district, Karnataka in 1956 and was named after the region.
- Presently, a southward and northward spread of the disease virus along the Western Ghats has been reported in the adjoining states of Kerala, Tamil Nadu, Goa and Maharashtra. It **became active due to**

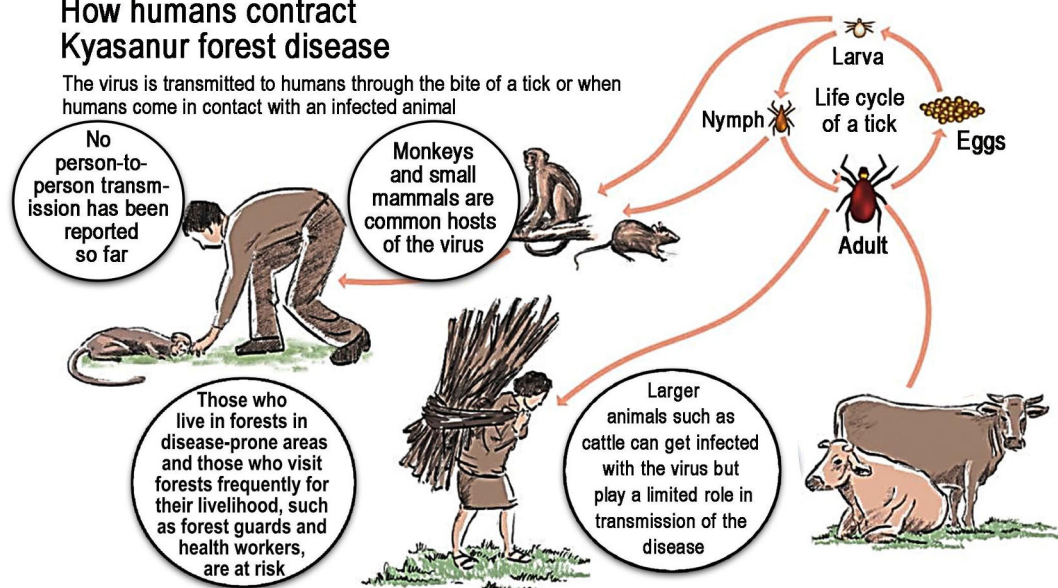


**ecological changes** like deforestation, anthropogenic intrusion in pristine ecosystems.

- It is **also known as monkey fever**, as monkeys also get infected and death of monkeys act as a warning sign.
- **Transmission and Identification:** Primates that come in contact with infective ticks contract the disease. Human beings who visit the same forest area can contract the disease.

### How humans contract Kyasanur forest disease

The virus is transmitted to humans through the bite of a tick or when humans come in contact with an infected animal



- **Symptoms:** Fever, redness of the eyes, severe headache, and body pain. Three-four days after the onset of initial symptoms, the patient may have gastro-intestinal symptoms. In severe cases, bleeding from the nose is noted.
- **Treatment:** There is no specific treatment, doctors handle the symptoms, and monitor the vitals daily.

## BUBONIC PLAGUE

#HEALTH

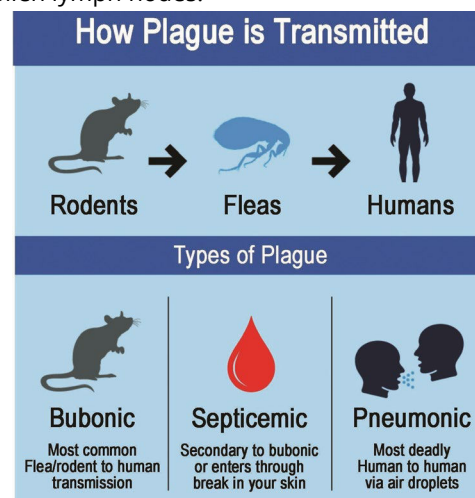
PRIMARY SOURCE The Indian EXPRESS

The first case of **bubonic plague** was confirmed in the United States since 2005.

### ABOUT BUBONIC PLAGUE

- Bubonic plague is an **infectious disease caused by the bacterium Yersinia pestis**, a **zoonotic bacteria** usually found in small animals and their fleas.
- **Transmission:**
  - the bite of infected vector fleas
  - unprotected contact with infectious bodily fluids or contaminated materials (like bitten by an infected rat)
  - the inhalation of respiratory droplets/small particles from a patient with pneumonic plague. (Pneumonic Plague)

- **Symptoms:** Fever, headache, weakness and painful, swollen lymph nodes.



### OTHER TYPES OF PLAGUE

- **Septicemic plague** happens if the bacteria enters the bloodstream, **meaning when the infection goes all through the body**. This often **follows untreated**



**bubonic plague, and causes additional, more serious symptoms.** These include abdominal pain, shock, bleeding into the skin, and blackening of appendages, most often fingers, toes or the nose.

- **Pneumonic plague** is the most dangerous, and almost always fatal if untreated. It happens when the bacteria enters the lungs, and adds rapidly developing

pneumonia to the list of symptoms. It is the **only form of plague** that can be spread from person to person by inhaling infectious droplets, also making it the most contagious.

#### **TREATMENT OF PLAGUE**

All forms of **plague are treatable with common antibiotics. It can be fatal if it is not treated.**

## PRACTICE QUESTIONS

### MCQS

**Q1. Consider the following statements with reference to Launch Vehicle Mark-3 or LVM3:**

1. LVM3 is a four-stage launch vehicle using solid rocket motors for its first and third stages, and liquid rocket engines for its second and fourth stages.
2. LVM3 is primarily designed to launch communication satellites into geostationary orbit.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

**Q2. Consider the following statements:**

1. Supernovae are powerful explosions that occur when a massive blackhole engulfs any star.
2. Helium stars are the stars with a core of helium and outer layers of Hydrogen.

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

**Q3. Zodiacal light, sometimes in news, is best described by which of the following?**

- (a) Natural light display in high-latitude regions caused by the interaction of charged particles from the Sun with the Earth's atmosphere.
- (b) Cosmic optical background that represents a "fossil" or "relic" light that originated from early epochs in the universe's history.
- (c) Continued emission of light without heat after exposure to and removal of a source of electromagnetic radiation.
- (d) Faint glow visible on nights from Earth due to the sunlight scattered by interplanetary dust.

**Q4. Which among the following statements best describes Bose-Einstein Condensate (BEC):**

- (a) Ionised gas where a significant portion of atoms have lost electrons, creating a mixture of positively charged ions and free electrons.
- (b) A state of matter when a gas of bosons at very low densities is cooled to temperatures very close to absolute zero.
- (c) A very hot gas where atoms move at extremely high speeds.
- (d) A solid material where atoms are tightly packed together in a regular arrangement.

**Q5. Consider the following statements, with reference to the Carbon Nano-tubes (CNTs):**

1. Plasma-enhanced chemical vapour deposition technique (PECVD) used in synthesising CNTs requires Cobalt as catalyst.

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**SCIENCE & TECHNOLOGY**

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2. Synthesising CNTS using Plasma-enhanced chemical vapour deposition technique (PECVD) is executed under atmospheric pressure.  
Which of the statements given above is/are correct?
- (a) 1 only  
(b) 2 only  
(c) Both 1 and 2  
(d) Neither 1 nor 2

**DESCRIPTIVE QUESTIONS**

- Q1.** Highlight the significance of using Cryogenic fuel in the advanced launch vehicles of Indian Space Research Organisation.
- Q2.** The contributions of Satyendra Nath Bose were instrumental in the development of Quantum Physics. Discuss by giving special emphasis on Bose-Einstein Condensate.

**Answers:** 1-b, 2-d, 3-d, 4-b, 5-b

# HISTORY, HERITAGE & CULTURE

# GS PAPER (PRELIMS) & GS PAPER I (MAIN)

## CHHAU DANCE

#HERITAGEANDCULTURE #FOLKDANCESININDIA

PRIMARY  
SOURCE THE HINDU

*Tarapada Rajak and team performed Purulia Chhau at an event in Kolkata.*

### ABOUT CHHAU DANCE FORM

- It is a **semi-classical Indian dance** form that intricately weaves together martial and folk traditions.
- Some narrations also use natural themes such as *Sarpa Nritya* (serpent dance) or *Mayur Nritya* (peacock dance)
- Chhau encompasses elements from martial arts, folk themes and religious motifs inspired by **Shaivism, Shaktism, and Vaishnavism**.
- In 2010, UNESCO inscribed Chhau in Representative List of Intangible Cultural Heritage of Humanity.
- Traditionally performed by all-male troupes, Chhau holds regional significance, in the East Indian region and is believed to have its origins traced to various linguistic roots.
  - Some propose a connection to the Sanskrit term **Chaya**, signifying shadow, image, or mask, while others associate it with the Sanskrit root **Chadma**, implying disguise.
  - Alternative research, adds that it is derived from the Odia language, pointing to the term **Chhauni**, encompassing meanings related to military camp, armour, and stealth.

### CHARACTERISTICS

- In Chhau dance, costumes inspired by Shaktism themes, such as the depiction of **Durga with a lion**, are prominently featured, particularly in the Purulia style.
- This vibrant dance form is primarily showcased during festivals, with a notable emphasis on community participation, especially during the spring festival of Chaitra Parva.

- Masks hold a significant role in the Purulia (West Bengal) and Seraikella styles (Jharkhand), contributing to the unique visual appeal of the dance.
- Chhau dance in northern Odisha (Mayurbhanj) incorporates masks only during the initial stage when the artists make their introductory appearance to the audience.
- The transmission of knowledge related to dance, music, and mask-making is often passed down orally.
- The masked styles of Chhau dance seamlessly blend elements of dance and martial practices, incorporating mock combat techniques (khel), stylized walk of birds and animals (chalis and topkas), and movements inspired by the daily chores of village housewives (uflis).
- Executed exclusively by male dancers, Chhau performances take place at night in open spaces referred to as **akhada or asar**.
  - However, several all-women troupes are also participating now.
  - Mousumi Chowdhury, from Purulia's, is credited with starting the trend.
  - In 2010, Mousumi set up the first all-women Chhau troupe of Purulia known as **Mitali Chhau Maldi**.
- Featuring instruments are: **reed pipes mohuri, shehnai, variety of drums such as cylindrical dhol, the large kettle drum dhumsa, and the kharkai or chad-chadi**.
- Roots of Chhau dance, particularly in the Purulia style, can be traced back not only to **Paika and Natua** but also to the significant influence of Nachni dance.
  - Nachni dance contributed female walks and movements to Chhau, introducing elements of **Lasya Bhava** from the **Natya Shastra**, characterized by elegance, sensuality, and beauty.

## HISTORY, HERITAGE &amp; CULTURE

- Conversely, the male dance movements in Chhau are attributed to **Shiva's tandava style, adding a dynamic dimension to the dance form.**

**Three Varieties of Chhau:**

- **Three main styles of Chhau dance:**
  - **Saraikella Chhau in Jharkhand;**
  - **Mayurbhanj Chhau in Odisha;**
  - **Purulia Chhau in West Bengal;**
- **Mayurbhanj Chhau artists don't wear masks.**
- The distinctiveness of the three primary styles of Chhau, lies in their regional origins and distinctive characteristics.

**(Seraikela)****SERAIKELA CHHAU**

- It evolved in the region of **Seraikela, during the era of Kalinga's Gajapati rule (1434 to 1541 CE), in Jharkhand.**
- Seraikella Chhau's technique are shaped by the erstwhile nobility of the region, who not only performed but also choreographed the dance.
- In contemporary era, individuals from diverse backgrounds engage in the performance of Seraikella Chhau.
- This style employs **symbolic masks, with the acting itself establishing the role played by each performer.**
- Notably, these masks are skillfully crafted by potters who specialize in creating clay images of Hindu deities.

**(Mayurbhanj)****MAYURBHANJ CHHAU**

- Odisha's Mayurbhanj district, bordering Bengal and Jharkhand and known for the Similipal biosphere, **was ruled by the Bhanja dynasty from 7th century AD.**
- The rulers were great patrons of the arts.
- **Chhau, which is believed to have derived its name from the chhauni or military camp, evolved from the mock fights and drills that used to be held to keep the soldiers battle-ready.**
- Mayurbhanj Chhau **opts for a mask-free approach, yet shares technical similarities with Seraikella Chhau in its execution.**
- Mayurbhanj Chhau **is the most vigorous of the three styles** of Chhau.
- The technique and choreography are directly drawn from war practices of Odia soldiers, **who were popularly known as paikas.**
- The Government of Odisha took significant steps to promote Chhau dance by establishing the **Mayurbhanj Chhau Nritya Pratisthan in Baripada in 1960.**

**(Purulia)**



## HISTORY, HERITAGE &amp; CULTURE

**Purulia Chhau:**

- The Chhau dance that originated from Purulia finds its inspiration from martial arts and combative training.
- The dancers perform a repertoire that explores a variety of subjects like mythological episodes from Ramayana, Mahabharata and Puranas, local legends and folklores and abstract themes.
- The traditional dance is performed at open spaces at the rhythm of various kinds of drums and other musical instruments.
  - Indigenous drums like **dhol, dhumsa and kharkai** are used along with the melody of **mohuri and shehnai**.
- Over the centuries, this dance form was patronized by the royal families, rich landlords as well as by a few British Governors of the region.
- **It is believed that the Raja (king) of Baghmundi in Purulia was the main patron of these dances.**
- The **Chhau mask from Purulia has been officially recognized under Geographical Indications**, emphasizing its unique and traditional nature
- The masks for **Purulia Chhau are crafted by artists from the Sutradhar community.**

## MUGHAL RULER AURANGZEB

#MEDIEVALINDIANHISTORY`

PRIMARY  
SOURCE THE HINDU

*The case of Gyanvapi Mosque in Varanasi, Uttar Pradesh is caught in the midst of a legal and social controversy. The mosque is said to have been built during the reign of Mughal emperor Aurangzeb in the 17<sup>th</sup> century.*

**INTRODUCTION**

- **Historian Audrey Truschke, in 'Political motives, writing in Aurangzeb: The Man and the Myth', mentions that 'Hindu and Jain temples dotted the landscape of Aurangzeb's kingdom and these institutions were protected by the state.**
  - According to Truschke, support for temples could be revoked when they **acted against the imperial interests or the Mughal state** and therefore, targeted destruction of temples were undertaken.

- Truschke also talks about, **how in 1659, Aurangzeb asked the imperial officials to check for the unlawful harm or disturbances** being created for the Brahmins of Benares and nearby places.
- **Historian Catherine Asher, in 'Architecture of Mughal India', portrays the destruction of Temples during the reign of Aurangzeb, as results of several political events.**
  - As per the historical records, Man Singh's great-grandson, **Jai Singh, helped Shivaji flee from court of Aurangzeb in 1666.**
  - As per the writings of Asher, **the destruction of Vishvanath temple in Benares in 1669, which was rebuilt by Raja Man Singh (during Akbar's reign)** was largely to punish those who were suspected of supporting Shivaji.
    - The Vishvanath temple was built before the entry of the Muslims in India and in 12<sup>th</sup> century was attacked by Qutbuddin Aibak.
- **Scholar, Satish Chandra, in his works has mentioned that the destruction of temples during Aurangzeb's reign was mainly to check on the spread of subversive ideas against the Mughal state.**
  - In **Maasir-i-Alamgiri (A Persian language chronicle by Saqi Mustaid Khan)** mentioned that, Aurangzeb learned that at Benares, the Brahman misbelievers used to teach false books in established schools to their admirers and students (both Hindu and Muslim).
  - In **1669, Aurangzeb took strong actions against some temples in Thatta, Multan and Benares.**

**HISTORY KASHI VISHVANATH TEMPLE**

- Dedicated to Lord Shiva, in Varanasi, Uttar Pradesh.
- It is **one the twelve Jyotirlinga shrines** in India.

## HISTORY, HERITAGE &amp; CULTURE

- Built in **Nagara style of temple architecture** which is characterized by its towering spire (**shikhara**) and intricately carved stone facades.

**Twelve Jyotirlinga shrines in India are:** *Somnath* in Gujarat; *Mallikarjuna* at Srisailem in Andhra Pradesh; *Mahakaleswar* at Ujjain in Madhya Pradesh; *Omkareshwar* in Madhya Pradesh; *Kedarnath* in Uttarakhand; *Bhimashankar* in Maharashtra; *Vishvanath* at Varanasi in Uttar Pradesh; *Triambakeswar* in Maharashtra; *Baidyanath Jyotirlinga* in Deogarh, Jharkhand; *Nageswar* at Dwarka in Gujarat; *Rameshwar* at Rameshwaram in Tamil Nadu & *Grishneshwar* at Aurangabad in Maharashtra.

- **Kashi Khanda of Skand Purana** is dedicated to the city of Varanasi. As per the Kashi Khanda, there were a total of 1099 temples, out of which 513 were specifically devoted to the worship of Shiva.
- Original temple (also known as **Adi Vishveshwara Temple**) was destroyed by Ghurids in 1194, when Muhammad ibn Sam defeated Jayachandra of Kannauj near Chandawar and razed the city of Kashi.
- In **1230, the temple was rebuilt near the Avimukteshwara Temple**, away from the main site, during the reign of **Ilutmish (Delhi Sultanate ruler, 1211–1266)**.
- It was demolished again during the rule of **Sikandar Lodi (1489–1517)**.
- **Raja Man Singh built the temple during Akbar's reign**, however the orthodox section in Hindus boycotted it as Man Singh's sister was married to Mughal ruler Akbar
- **Raja Todar Mal** completed reconstruction of temple in **1585**.
- In 1669, Mughal Emperor Aurangzeb destroyed the temple and **built the Gyanvapi Mosque in its place**.
- In **1780, Ahilyabai Holkar** rebuilt the present temple adjacent to the mosque.
- In **1835, Maharaja Ranjit Singh of Sikh Empire** donated gold for plating the temple's dome.

**ABOUT MUGHAL RULER AURANGZEB**

- Served as the viceroy of the Deccan in 1636-1637 and the governor of Gujarat in 1645-1647.

- He jointly administered the **provinces of Multan and Sindh in 1648-1652** and continued the expeditions into neighbouring Safavid territories.
- Shahjahan in 1657, nominated Dara Shikoh as his successor. This was not accepted by Aurangzeb. **He proclaimed himself as emperor in 1658. Thus, began the war of succession.**
- In April 1658, the allied army of Dara Shikoh and the kingdom of Marwar was defeated by Aurangzeb **at the battle of Dharmat**.
- Then, at the decisive **battle of Samugarh in May 1658**, Aurangzeb's sovereignty and suzerainty was cemented and was acknowledged throughout the empire. He imprisoned Shahjahan (his father) in the Agra fort.
- The '**Fatwa Alamgiri**' was imposed successfully by **Aurangzeb as the principal regulating body** of the empire and prohibited religiously forbidden activities in Islam.
- He reigned for fifty years and during the first twenty-five years he resided in the North and personally occupied the affairs of northern India.
- Aurangzeb **retained Shahjahanabad (Old Delhi) as his capital**, but after some two decades the capital was shifted to wherever Aurangzeb would set up camp during his long military campaigns.
- In **1681, his son, Prince Akbar, rebelled in Deccan**. Aurangzeb from this time onwards was continuously engaged in the region and mainly the "**Deccan Ulcer**" kept him engaged. He died at **Ahmadnagar, Maharashtra in 1707**.

**DECCAN ULCER**

- Aurangzeb's policy towards Deccan was basically motivated by **curtailing the influence of the Marathas, containing the rebellions by Shia kingdoms-Golconda and Bijapur and keeping in check his own son's rebellions**.
- He successfully **annexed Bijapur (1686) and Golconda (1687)**. Historians see the destruction of

the Deccan kingdoms as the major blunder, **as these kingdoms acted as the barrier between the Mughals and the Marathas.**

- Now, Mughals had to face direct confrontations with the Marathas.
- As per the historian, **J.N. Sarkar, the 'Deccan Ulcer' ruined Aurangzeb.**
- Shaista Khana and Jai Singh, generals of Aurangzeb, were sent to capture Shivaji.
- **Jai Singh successfully captured Shivaji**, but Shivaji escaped to the Deccan, using the **Guerrilla warfare tactics, which was not an integral part of Mughal Army strategies.**
- The long battle with Marathas severely impacted the Mughal treasury.

#### **RELIGIOUS POLICY OF MUGHAL STATE UNDER AURANGZEB**

- He implemented a religious policy marked by orthodox Islamic principles. **His policy had two aspects:** *to promote the tenets of Islam and to ensure that the people led their lives accordingly and to adopt anti-Hindu measures.*
- Influenced by the teachings of Ahmad Sirhindi, Aurangzeb aimed to transform India from Dar-ul-harb (land of infidels) to Dar-ul-Islam (Islamic land).
- He **rejected the Persian concept of kinship (Farr-i-Aizadi)** in favour of a rule based on the Quranic concept of kingship.
- Aurangzeb banned the **Zoroastrian festival of Nauroz**, discouraged un-Islamic ceremonies, and reinstated the jizya tax on non-Muslims in 1679.
- However, Aurangzeb's emphasis on Sharia conflicted with **his acknowledgment that secular decrees (Zawabit) could override Sharia law.**
- He took measures to promote Islam, **such as forbidding the Kalima (Islamic confession of faith)**, on his coins, as he believed, the holy words might be desecrated under foot or defiled by the non-believers.
- He **appointing a Censor of Morals (Muhktasib)** to enforce Islamic laws.
- The ceremony of weighing the **emperor against gold and silver on his two birthdays (i.e. according to the lunar and solar calendars) was stopped.**
- **Following were the anti-Hindu measures adopted by Aurangzeb:**

#### ○ **Demolishing temples and breaking idols:**

- **Mathura temple was built by Bir Singh Bundela**, who had gained Jahangir's favour. **Aurangzeb converted it into a large mosque** and name of Mathura was changed to Islamabad.
- In the first year of his reign, **he issued orders to governor of Orissa** to demolish all temples in the province.
- Mosques were built at sites of different temples.
- He destroyed Vishwanath temple in Varanasi and Somnath temple in Kathiawar.

#### ○ **Imposition of Jizya in 1679, other taxes and conversions:**

- Akbar had abolished this tax on the Hindus but Aurangzeb again levied this tax.
- **Manucci held that the object of the tax was two-fold:** *first to fill up his treasury which had begun to shrink on account of expenditure on his various military campaigns and secondly to force the Hindus to embrace Islam.*
- For the Hindus the only way to escape from the payment of various taxes like pilgrim tax, trade tax, Jizya, etc. was conversion to Islam. Getting jobs after conversion also became easier. The Hindu prisoners were freed on their conversion to Islam.
- *However, Brahmins, women, children, elders, the handicapped, the unemployed, the ill, and the insane were all perpetually exempted.*

#### ○ **Discriminatory toll/tax:**

- He enforced a higher tax burden on **Hindu merchants at the rate of 5% (as against 2.5% on Muslim merchants)**, which was a sharp turn from Akbar's uniform tax code.
- Later on **Muslim traders were totally exempted** from the payment of this tax.

#### ○ **Restrictions on Hindu educational institutions:**

- For destroying the culture of the Hindus, Aurangzeb destroyed their several educational institutions at **Varanasi, Multan and Thatta.**
- He placed restrictions on the **starting of new Pathshalas.**

- Despite Aurangzeb's staunch Islamic stance, his imperial bureaucracy employed a higher percentage of Hindus compared to his predecessors.

- **Between 1679 and 1707**, the number of Hindu officials in the **Mughal administration increased by half, representing 31.6% of Mughal nobility.**
- Many of these officials were Marathas and Rajputs, political allies of Aurangzeb.
- Nevertheless, he encouraged high-ranking Hindu officials to convert to Islam, contributing to the complex religious dynamics of his reign.

#### **Results of the religious policy of Aurangzeb:**

Weakening the entire structure of the Mughal empire. It led to several conflicts and wars in different parts of the country.

- **Conflict with Jats:** In 1669, Hindu Jats began to organise a rebellion that is believed to have been caused by the re-imposition of jizya and destruction of Hindu temples in Mathura. **Jats were led by Gokula.** By the year 1670, Jat rebels were quelled and the Mughal Army **took control of Tilpat region.** Gokula was caught and executed.
- **Conflict with Satnamis:** In 1672, the Satnami sect organised a revolt. Aurangzeb responded by organising a Mughal army of 10,000 troops, artillery, and a detachment of his imperial guards. His army crushed the Satnami rebellion
- **Conflict with Sikhs:** Ninth Sikh Guru, **Guru Tegh Bahadur**, was opposed to forced conversion of the local population. Approached by Kashmiri Pandits against forced religious conversions, Guru Tegh Bahadur sent a message to the emperor that if he could convert Teg Bahadur to Islam, every Hindu will become a Muslim. **In response, Aurangzeb ordered arrest of the Guru. He was then brought to Delhi and tortured so as to convert him. On his refusal to convert, he was beheaded in 1675.**
- **Conflicts with the Rajputs:** Aurangzeb's decision that the jizya (poll tax) should be levied on Hindus of all classes agitated the chiefs of Rajasthan, who had until then served the empire faithfully.

#### **CONCLUSION**

*The opinion of Historians and scholars, on the religious policy of Aurangzeb is divided. Historians like **Jadunath Sarkar, S.R. Sharma and A.L. Srivastava** regarded the policy being of religious bigotry and persecution, whereas **Shibli Nomani, Zahiruddin Faruki and Ishtiaq Hussain Qureshi** justify most of Aurangzeb's actions as political expedients. Scholars like **Satish Chandra and M. Athar Ali**, give a*

*neutral analysis without emphasising into the 'for' or 'against' controversy.*

## INDIAN MARTIAL ARTS TRAINING FOR ARMY TROOPS

#TRADITIONALMARTIALARTSININDIA

PRIMARY  
SOURCE THE HINDU

*Indian Army has added martial arts to the regular training of troops in addition to the usual physical exercise, post the Galwan violent clash (Between India and China). For example, the Punjab regiment has incorporated Gatka in the training regime and the Udhampur-based Northern Command introduced the Israeli-origin martial art Krav Maga.*

#### **NEED**

- Regions like, **along the Line of Actual Control (LAC) in Kibithu in Eastern Arunachal Pradesh** are of difficult terrains like mountains and jungles, unpredictable and heavy rains.
- To face such challenges Army continuously undertake training and the martial arts is one of them.

#### **KRAV-MAGA, ISRAELI ORIGIN MARTIAL ART**

- Krav-Maga is an Israeli martial art.
- Developed for the Israel Defence Forces, it is derived from a combination of techniques used in **aikido, judo, karate, boxing, and wrestling.**
- It is known for its focus **on real-world situations and its extreme efficiency.**

#### **MARTIAL ARTS IN INDIA**

##### **Khukri:**

- Type of **short sword with a distinct recurve** in its blade that originated in the Indian subcontinent.
- Serves multiple purposes as a weapon and also as a regular cutting tool.
- National weapon of Nepal, traditionally serving the role of a basic utility knife for the Nepali-speaking Gurkhas.
- **Symbol of Gurkha soldier in Indian Army.**



## HISTORY, HERITAGE & CULTURE

### Kalaripayattu:

- **One of the oldest martial arts in India, Kalaripayattu.** It is also widely practiced by women.
- Practiced in most parts of southern India, **originated in the state of Kerala in the 4th century A. D.** According to legends, sage Parasurama, who built temples and introduced martial arts, started Kalaripayattu.
- Kalari, refers to a specific type of school/gymnasium/training hall where martial arts are practiced.

- This art form includes mock duels (armed and unarmed combat) and physical exercises.
- **Not accompanied by any drumming or song, the most important aspect is the style of fighting (Footwork).**
  - Other aspects are: fighting with Otta (an 'S' shaped stick), Puliyanam or sword fight, Verumkai or bare-handed fight, AngaThari or use of metal weapons.



### Silambam:

- The kings which ruled in **Tamil Nadu, including Pandya, Chola and Chera, had promoted it during their reign.**

- The reference to the sale of silambam staves, pearls, swords and armour to foreign traders can be found in a **Tamil literature known as Silappadikaram, which dates back to second century A.D.**

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## HISTORY, HERITAGE & CULTURE

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- There are **four different kinds of staves used in this art**.
  - First, torch silambam, lights balls of cloth at one end of the staff.
  - Second produces a sonorous swishing sound.
  - Third is a non-elastic staff that gives clattering sounds.
  - Fourth is quite short yet powerful staff.

### Thang-ta and Sarit Sarak:

- Created by the **Meitei people of Manipur, Thang-ta is an armed martial art and one of the most lethal combat forms**.
- **Sarit Sarak, on the other hand, is an unarmed art form that uses hand-to-hand combat**.
- In the 17th century, it was successfully used by the Manipuri kings to fight the British.
- **Thang refers to a 'sword', while Ta refers to a 'spear'**, thus sword and spear are the two main elements of Thang-ta.
- The two components thang-ta and sarit sarak are together **called Huyen Langlon**.

### Cheibi Gad-ga:

- One of the most ancient martial arts of Manipur, it involves fighting using a **sword and a shield**. It has now been modified to a stick encased in soft leather in place of a sword and a leather shield.

### Pari-khanda:

- Created by **Rajputs, it is a form of martial art from Bihar**.
- It involves fighting using **sword (Khanda) and shield (Pari)**.
- Its steps and techniques are widely used in **Mayurbhanj Chhau dance**.

### Thoda:

- Originating in the **State of Himachal Pradesh**, Thoda is a **mixture of martial arts, sport and culture**.
- It takes place during **Baisakhi (13th and 14th April) every year**.
- The martial art relies on a player's skill of archery.
- The equipment required for this game, i.e. wooden bows and arrows, are prepared by traditional skilled artisans.

- In the game, there are two groups of roughly 500 people each. **Most of these are not archers but dancers who come along to boost the morale of their respective teams**.
- **The two teams are called Pashis and Saathis, who are believed to be the descendants of Pandavas and Kauravas of Mahabharata**.

### Gatka:

- It is a weapon based martial art form, performed by the **Sikhs of Punjab**.
- Gatka features the skilful use of weapons, including stick, Kirpan, Talwar and Kataar.
- The attack and defence in this art form is determined by the various positions of hands and feet and the nature of weapon used.

### Mardani Khel:

- This is a traditional **Maharashtrian armed martial art, which is practiced widely in the district of Kolhapur**.
- Mardani Khel focuses primarily on skills of weaponry, especially swords, swift movements and use of low stances that is suited to the hill ranges.
- **It is known for the use of the unique Indian Pata (sword) and Vita (corded lance)**.

### Inbuan Wrestling:

- It is believed to have **its genesis in 1750 A.D.**
- It has very strict rules that prohibit stepping out of the circle, kicking and knee bending. The way to win this is by lifting the opponent off their feet.
- **This art form was regarded as a sport only after the people of Mizoram migrated from Burma to Lushai hills**.

### Kuttu Varisai:

- **First mentioned in Sangam literature (first or second century B.C.), mainly practiced in Tamil Nadu**.
- It is known for 'empty hand combat' and considered as **an unarmed component of Silambam**.
- It is used to advance athleticism and footwork through starching, yoga, gymnastics and breathing exercises.
- The major techniques used in this art include grappling, striking and locking.
- **It also uses animal-based sets** including snake, eagle, tiger, elephant and monkey.

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**HISTORY, HERITAGE & CULTURE**

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**Musti Yuddha:**

- **Originated in Varanasi, Uttar Pradesh**, it is an unarmed martial art form resembling boxing.
- Musti Yuddha incorporated the development of all three aspects, physical, mental and spiritual.
- The fights in this art are divided into **four categories and are named according to the Hindu Gods**: Jambuvanti; Hanumanti; Bhimaseni; Jarasandhi.

**Paika:**

- Paika akhada is an Odia term, translates as 'warrior gymnasium'.
- Performed by the people of **Khandayat caste (peasant-militias) and Gopal caste in Odisha, eastern India**.
- In former times they served as the **Paikas (foot Soldiers) under the kings**.
- Incorporates acrobatic manoeuvres, **use of the khanda (straight sword), patta (gauntlet-sword), sticks, and other weapons**.

**Sqay:**

- Sqay is a **South Asian martial art from Kashmir, which involves fighting with a sword and shield**.
- In 2023, the Indian Army's Chinari Corps organized a Sqay session for girls in the Shopian district of Kashmir.
- **Sqay is one of 43 sports that was included in the 2023 National Games of India.**

**Kathi Samu:**

- It is one of the ancient martial arts of **Andhra Pradesh, practiced by the royal armies**.
- This prestigious **martial art employs various kinds of swords**.
- The place where Kathi Samu is performed is **known as 'Garidi'**.
- **Stick fight known as 'vairi'** has an important role in Kathi Samu and it is the prelude to the actual swordfight.
- **'Gareja' in which a participant holds four swords, two in each hand and 'Dal Farri Khadga' are other important aspects of the sword skills.**

**Bandesh:**

- **Regarded as an empty-handed combat technique**.
- In the competition of this ancient martial art, the conqueror is the one who takes the weapon from the other.

- *There are six different stages namely, Pavithra (footwork), Rokh (blocking), Lapet (Twisting), Fekan (Throw), Cheen (Snatching) and Bandesh (Lock hold).*
- Although the main principle of Bandesh is to use unarmed techniques to defeat the adversary, it is also practiced with weapons, **maintaining the same principle of not wounding the enemy fatally.**

**Mallakhamba:**

- It is a traditional sport, originating from the Indian subcontinent, in which a group of gymnasts perform aerial yoga and gymnastic postures.
- The pole is usually made from sheesham (Indian rosewood) polished with castor oil.
- Other popular versions of *mallakhamba* are practiced using a cane or a rope instead of a pole.
- **In 2013, the Indian state of Madhya Pradesh declared *mallakhamba* the state sport.**

**Insu Knawr and Kirip Saldu:**

- **Insuknawr** or Rod Pushing Sport is an indigenous game of Mizoram, a state in North-East India.
- **Kirip Saldu**: It is an indigenous form of wrestling quite popular with the **Nicobarese tribe**.

**Varma Ati/Marma ati:**

- Practised in old Travancore including **Kanyakumari district of Tamil Nadu**.
- **It is called the southern style of Kalaripayattu.**
- It's a unique **'Neuro Martial Art' in warfare** practised by the Royal Thiruppad Nadans to defeat the enemy without any external injuries.

**FATEHPUR SIKRI**

#ART&amp;CULTURE

PRIMARY  
SOURCE The Indian  
EXPRESS

*Fatehpur Sikri, a city built in 1569 AD has been made nearly 95% wheelchair accessible.*



## HISTORY, HERITAGE &amp; CULTURE

**ABOUT FATEHPUR SIKRI (AGRA, UTTAR PRADESH)**

- **Between 1571 and 1585 AD**, the Mughal emperor Akbar chose Fatehpur Sikri as the site for his capital, **employing red sandstone** in its construction.
- Fatehpur Sikri was abandoned in **1585 during a campaign in Punjab** and completely deserted in 1610.
- Recognizing its historical significance as the Mughal Empire's capital and its remarkable architecture, **Fatehpur Sikri was designated a UNESCO World Heritage Site in 1986.**
- The city derives its name from the pre-existing village of Sikri, and archaeological evidence indicates a **settlement in the region dating back to the Painted Grey Ware period.**
- An excavation conducted by the **Archaeological Survey of India (ASI) in 1999–2000 at Chabeli Tila revealed a rich history.** The excavation yielded numerous *Jain statues, some dating back a millennium, depicting Bhagwan Adi Nath, Bhagwan Rishabh Nath, Bhagwan Mahavir, and Jain Yakshinis.*
- Historian Syed Ali Nadeem Rezavi suggests that the **area prospered under Sunga rule and later under Sikarwar Rajputs.**
- The **Sikarwar Rajputs, who controlled the region from the 7th to the 16th century,** constructed a fortress that stood **until the Battle of Khanwa in 1527.**
  - **The March 16, 1527, Battle of Khanwa** marked a pivotal moment in Medieval Indian history as *Babur's Timurid forces clashed with the Rajput Confederation led by Rana Sanga.*
  - **This significant battle, notable for introducing extensive gunpowder use in Northern India,** concluded with **a decisive victory for Babur,** further solidifying the Mughal Empire's dominance in the northern regions.
  - **Babur, the founder of Mughal Empire, called the place Shukri,** after its large lake that was used by Mughal armies.
  - Babur constructed a garden here called **the 'Garden of Victory',** after defeating Rana Sangha at its outskirts.
- The **construction of Khanqah of Sheikh Salim Chishti, (saint who predicted the birth of Akbar's son Jahangir) commenced after Jahangir's birth** in the village of Sikri in 1569.

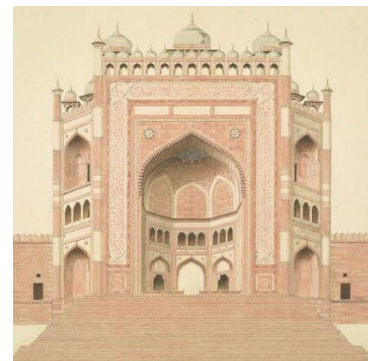
- This complex was eventually named Fatehpur Sikri, translating to the **'City of Victory,' in honour of Akbar's successful Gujarat campaign in 1573. Buland Darwaza, was erected to commemorate Akbar's triumph.**
  - In 1573, Emperor Akbar of the Mughal dynasty seized control of the Gujarat Sultanate by exploiting the vulnerabilities of the Gujarat Sultan, Muzaffar Shah III, and his conflicting nobility.
  - Subsequently, Muzaffar was captured and held captive in Agra.
- In **1803, after the East India Company took control of Agra, Fatehpur Sikri became an administrative centre until 1850.** During this period, in 1815, the Marquess of Hastings ordered the restoration of monuments at Sikri.

**ARCHITECTURE AT FATEHPUR SIKRI**

- The architectural style of Fatehpur Sikri follows Timurid forms and styles, characterized by massive constructions predominantly using red sandstone.
- Influences from **Gujarat are evident in the decor of the palaces within Fatehpur Sikri.**
- Access to Fatehpur Sikri is facilitated through gates along the long fort wall.
- These gates include *Delhi Gate, Lal Gate, Agra Gate, Birbal's Gate, Chandanpal Gate, Gwalior Gate, Tehra Gate, Chor Gate, and Ajmeri Gate.*
- The palace features both **a summer palace and a winter palace for Queen Mariam-uz-Zamani, commonly known as Jodha Bai.**

**Some of the important buildings in this city, both religious and secular are:**

- **Buland Darwaza:** The gate was added to commemorate Akbar's successful Gujarat campaign.



(Fig.: Buland Darwaza)

- **Jama Masjid:**

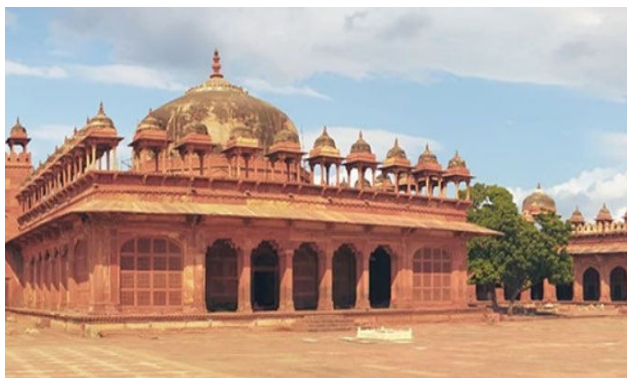


**HISTORY, HERITAGE & CULTURE**

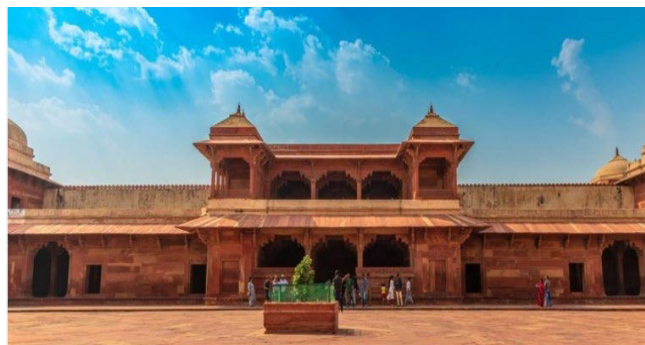
- Perhaps one of the first buildings to be constructed in the complex, **as its epigraph gives A.D. 1571–72 as the date of its completion**, with a massive entrance to the courtyard, Buland Darwaza added some five years later.
- A distinguishing feature is the row of chhatris over the sanctuary.
- There are three mihrabs in each of the seven bays, while the large central mihrab is covered by a dome, it is decorated with white marble inlay, in geometric patterns.

**(Fig.: Salim Chishti's tomb)**

- **Tomb of Salim Chishti:** Built with white marble, **the tomb of the Sufi saint, Salim Chishti (1478–1572), is within the Jama Masjid's sahn (courtyard).** Surrounding it is a covered passageway for circumambulation, with carved Jalis, stone pierced screens all around with intricate geometric design and an entrance to the south.
- **Diwan-i-Aam:** Diwan-i-Aam or Hall of Public Audience, where the ruler meets the general public.
- **Diwan-i-Khas:** Diwan-i-Khas or Hall of Private Audience, is a plain square building with four chhatris on the roof. **It is here that Akbar had representatives of different religions discuss their faiths and gave private audience.**

**(Fig.: Ibadat Khana)**

- **Ibadat Khana: (House of Worship)** was a meeting house built in **1575 CE by the Mughal Emperor Akbar, where the foundations of a new Syncretistic faith, Din-e-Ilahi** were laid by Akbar.
- **Anup Talao:** Anup Talao was built by Raja Anup Singh Sikarwar.

**(Fig.: Jodha bai Palace)**

- **Jodha Bai Mahal:** The place of residence of Akbar's chief Rajput wife, Mariam-uz-Zamani, commonly known as Jodha Bai, shows Rajput influence. There is also a Hindu temple and a tulsi math.
- **Panch Mahal:** A five-storied palatial structure, with the tiers gradually diminishing in size, until the final one, which is a single large-domed chhatra.
- **Birbal's House:** The house of Akbar's, who was a Hindu. Notable features of the building are the horizontal sloping sunshades or chajjas and the brackets which support them.

## TRIPURA BOARD ALLOWS KOKBOROK IN ROMAN SCRIPT IN EXAMINATIONS

#CULTURE #LANGUAGESININDIA #8THSCHEDULE

PRIMARY SOURCE THE HINDU

*The Tripura Board of Secondary Education (TBSE) will be allowing both Roman and Bengali scripts of the Kokborok in the examination. Earlier only the Bengali script was allowed.*

### ABOUT KOKBOROK LANGUAGE

- **Kokborok is a Tibeto-Burman language of the Bodo-Garo branch, spoken in Indian state of Tripura and neighbouring areas of Bangladesh.**

## HISTORY, HERITAGE & CULTURE

- The language is associated with the **Bodo and Dimasa languages of neighbouring Assam** and the **Garo language spoken mainly in the state of Meghalaya is also a related language.**
- The language was formerly known as **Tripuri and Tipra Kok** and its name was changed in the 20<sup>th</sup> century. These names refer to **the inhabitants of the former Twipra Kingdom and the ethnicity of its speakers.**
- From the 19<sup>th</sup> century and till the 20<sup>th</sup> century, it **became common people's dialect** during the rule of the Tripuri rulers in the Kingdom of Tipra.
- In **1979, the language was declared as an official language** of the state of Tripura.
- Major tribes** associated with the language: *Jamatia, Noatia, Kalai, Reang, Debbarma, Kalai, Rupini, Murasing, Uchoi.*

### DEVELOPMENT OF THE SCRIPT

- When the historical record of Tripuri kings began to be written down, i.e., **1<sup>st</sup> century AD, the Kokborok language was documented.**
- Rajratnakar (chronicle of the Tripuri kings)** was originally written in **Kokborok using the Koloma script** by **Durlobendra Chontai.**
  - The book was translated in **Sanskrit** and then in **Bengali (in the 19<sup>th</sup> century)** by **Sukreshwar and Vaneswar.**
- Koloma script fell out of use **after the 14<sup>th</sup> century** and eventually was lost.
- The **Kingdom of Twipra, from the 19<sup>th</sup> century began using the Bengali script** to write in Kokborok and **with the independence of India and Tripura's merger with Indian Union, the Roman script of the language gained promotions by NGOs.**
  - Merger of Tripura:**
    - The last ruler of the princely state of Tripura was **Kirit Bikram Kishore Manikya Bahadur Debbarma** who reigned from **1947 to 1949.**
    - After his death, the kingdom was merged with India on **9 September 1949**, and the **administration was taken over in October 1949.**
    - Tripura became a **Union Territory on 1 July 1963**, and attained the status of a **full-fledged state on 21 January 1972.**

- Both scripts (Roman and Bengali)** are now used in the state in education as well as in literary and cultural circles.
- Proposals have also been made for the adoption of scripts other than the Bengali or Roman scripts, **such as Ol Chiki.**

**Currently, there is a demand to give the language recognition as one of the recognized official languages of India as per the 8th schedule of the Constitution:**

1-অসমীয়া (Assamese)	2-বঙ্গোলি (Bengali)	3-ગુજરાતી (Gujarathi)	12-ଓଡ଼ିଆ (Oriya)	13-ਪੰਜਾਬੀ (Punjabi)	14-संस्कृतम् (Sanskrit)
4-हिंदी (Hindi)	5-ಕನ್ನಡ (Kannada)	6-کشمیری (Kashmiri)	15-سنڌي (Sindhi)	16-தமிழ் (Tamil)	17-తెలుగు (Telugu)
7-कोंकणी (Konkani)	8-മലയാളം (Malayalam)		18-اردو (Urdu)	19-বড়ো (Bodo)	20-সাঁওতালি (Santali)
9-মৈতৈলম (Manipuri)	10-मराठी (Marathi)	11-नेपाली (Nepali)	21-मैथिली, खसि (Maithili)	22-डोगरी (Dogri)	

**(Official Languages of India under Eighth Schedule)**

## INDIA TO DISPLAY RELICS OF LORD BUDDHA IN THAILAND

#ARTANDCULTURE #BUDDHISM

PRIMARY SOURCE THE HINDU

India will be holding an exposition of some of the relics of **Lord Buddha in Thailand** in February. The relics will be kept at the National Museum, Bangkok at first and then would be exhibited at different venues in Thailand.



**(Fig.: Case containing four pieces of the Holy relics of Lord Buddha)**

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**HISTORY, HERITAGE & CULTURE**

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**MORE ABOUT THE NEWS**

- Relics of **Lord Buddha along with the relics of two of his disciples, Sariputta and Maudgalyayana (or Maha Moggallana) preserved in Madhya Pradesh's Sanchi are being sent.**
- **These relics (known as Kapilavastu relics)** are under the protection of the National Museum, India, were excavated from **Piprahwa in the Siddharthnagar, Uttar Pradesh.**
  - **Siddharthnagar, is an ancient city of Kapilavastu region.**
  - **Kapilavastu, where Buddha is believed to be born in 563 BC (in the Sakya Kshatriya clan).**
- **In 1952, the Archaeological Survey of India (ASI) took ownership of Piprahwa** and this enabled further excavations at the site.
- The collection of sacred relics has been earlier taken to *Sri Lanka in 1976 and 2012, Mongolia in 1993 and 2022, Singapore in 1994 and 2007, South Korea in 1995 and Thailand also in 1995.*
- These relics are categorised as **'AA' (rare) antiquities, which means they are not meant to be lent for exhibitions, within India or in foreign nations.**
  - However, the exposition in **Thailand was being held upon a 'special request' by the Thai Government.**
- The event will be organised by the **Ministry of External Affairs** in collaboration with the Indian Embassy in Thailand, the **International Buddhist Confederation** and the Madhya Pradesh government.

**ABOUT BUDDHISM**

- Buddhism belongs to the **Shramana school** of religious movements (means one who performs acts of austerity and ascetic).
- **Mahabhiraskramana or the Great Going Forth** is the event when Gautam Buddha left his home and discarded worldly life.
- Buddha died in 483 BC near Kushinara (Kushinagar, UP) and the event is known as **Mahaparinirvana.**

**RELIGIOUS TEACHINGS OF BUDDHA**

- Buddhism is based upon **triratnas i.e., Buddha(the enlightened), Dhamma(doctrine)** and Sangha(commune).
- The core of his doctrine is expressed in the Ariya-sachchani (Four Noble Truths):

- there is suffering (**dukkha**);
- it has a cause (**dukkh samudaya**);
- it can be removed (nirodha); and
- There is a path leading to the **cessation of sorrow (dukkh nirodha gamini pratipada)**
- The way to achieve this is following the **Atthanga-magga (Eight-fold Path)/ Ashtangik marga/** Madhya Marga (one between extreme indulgence and extreme asceticism. It consists of **right view, intention, speech, action, livelihood, effort, mindfulness, and concentration.**
- Buddha was **against caste system** and opened the gates of Buddhism for all castes.
- Buddha suggested that **when desires are conquered, nirvana will be attained** (free from the cycle of birth and rebirth).

**RELICS ASSOCIATED WITH BUDDHA**

- Mahaparinibbana Sutta (in Digha Nikaya) mentions that after **attaining Parinirvana, the body of Buddha was cremated and the ashes divided among his lay followers.**
- First it was considered that ashes **should go to Sakya clan, to which the Buddha belonged.**
- However, a **Brahmin named Drona** divided the ashes of the Buddha into eight portions, for erecting stupa over the sacred relics.
  - *to Ajatasattu, king of Magadha;*
  - *to the Licchavis of Vaishali;*
  - *to the Sakyas of Kapilavastu;*
  - *to the Bullis of Allakappa;*
  - *to the Koliyas of Ramagama;*
  - *to the Brahmana of Vethadipa;*
  - *to the Mallas of Pava;*
  - *to the Mallas of Kushinagara.*
- Stupas erected over the bodily **relics of Buddha (Saririka stupas) are the earliest surviving Buddhist shrines.**
- **Two other important relics were distributed:**
  - Drona (the Brahmin who distributed the relics) received the vessel in which the body had been cremated;
  - **Moriyas of Pipphalivana received the remaining ashes of the funeral pyre.**



## HISTORY, HERITAGE &amp; CULTURE

- Research and excavations support the authenticity of the **stupa at Piprahwa, as well as the Relic Stupa of Vaishali and the Ramabhar Stupa at Kushinagar.**
  - But the archaeological investigations to date have not definitively identified other remaining stupas.
- **Mahavamsa and Ashokavadana mentions that Mauryan emperor, Ashoka,** collected seven of the eight relics of Gautama Buddha, and redistributed them across 84,000 stupas. These stupas were constructed around the world.
- **As per the 5<sup>th</sup> century scholar, Buddhaghosha, the Theravada tradition of Buddhism,** believes that, a proper Buddhist monastery was that which possessed the relics.
- **Relics of Buddha's noble disciples, Sariputta and Maudgalyayana (or Maha Moggallana) are preserved in Sanchi, Madhya Pradesh.**

## SOME OF THE SACRED RELICS IN INDIA

- **Kapilavastu relics:**
  - During an excavation in 1898, five small vases were found containing bone fragments, ashes, and jewels in a stupa **in Piprahwa. (the Archaeological Survey of India has identified Piprahwa as Kapilavastu)**
  - The inscription on the lid, refers to the relics of Buddha and his community, the Sakya:
    - *'Sukiti bhatinam sa-bhaginikanam sa-puta-dalanam iyam salila nidhare Bhaddhasa bhagavate sakiyanam.'*
    - **Means: 'this shrine for relics of the Buddha, is that of the Sakyas. The brethren of the distinguish One, in association with their sisters and with their children and their wives.'**
- **Buddha Relic Stupa was built by Lichhavis in Vaishali (Bihar) as a mud stupa in the 5th century BCE.**
- **Devni Mori, Gujarat (a Buddhist archaeological site):** Mortal remains of the Buddha belonging to the **third or fourth century** were found during an excavation in 1962–1963.
- **Dhamma Vinaya Monastery Pune, Maharashtra,** a was constructed and relics of **Gautam Buddha's and Arhant's** were enshrined.

- *An Arhant is one who has gained insight into the true nature of existence and has achieved nirvana (spiritual enlightenment).*
- **Global Vipassana Pagoda was constructed in October 2006** in Mumbai, and the relics of the Buddha were enshrined in the central locking stone of the dome, **making it the world's largest structure containing relics of the Buddha.**
- **Lalitgiri, Odisha:** A casket was discovered, believed to contain bones of Buddha.

## SATTRAS OF ASSAM

#RELIGIOUSANDCULTURALHISTORY

PRIMARY  
SOURCE THE HINDU

350-year-old Vaishnavite monastery in Majuli island in Assam associated with the Sattras was in news recently. Majuli, the largest inhabited river island in the world, is known for Vaishnavite learnings. **Sri Auniati Sattra was established in 1663 in Majuli island.**

## ABOUT SATTRAS

- Sattras, monastic institution was established **during the 16th-century Neo-Vaishnavite reformist movement** initiated by the **saint-reformer Sankaradeva (1449-1596).**
- It played a pivotal role in reshaping Assam's religious and social landscape, advocating for an egalitarian society.
- This movement, often referred to as the **'cultural renaissance' of Assam, brought about significant developments in music, dance, and folk theatre.**
- Young monks, known as **'Bhokots', were initiated into Sattras** to carry forward the ideals of the movement.
- With approximately 900 Sattras scattered across Assam, key centres include **Bordowa (Nagaon), Majuli, and Barpeta.**
  - **Most prominent centres are:**
    - **Bartadrava Than in Nagaon,** the birthplace of Srimanta Sankaradeva;
    - **Letekupukhuri Than in Lakhimpur,** the birthplace of Srimanta Madhavdev (disciple of Sankaradeva).
    - *Sankaradeva and Madhavdeva, are also credited with pioneering devotional music such as Borgeet,*



## HISTORY, HERITAGE & CULTURE

*Nama-Kirtana, and Ankiya Naat (theatrical performances).*

- They are also attributed for the development of the dance form known as Sattriya Nritya.
- Each Sattrra has its unique identity and historical trajectory within the neo-vaishnavite tradition.
- **Sattras are categorized into two major types:**
  - **Udasin sattras**, where bhokots lead celibate lives;
  - **Grihasti sattras**, where bhakts, not bound by celibacy, embrace domestic life.

### SANKARADEVA'S CONTRIBUTIONS

- **Srimanta Sankaradeva** propagated a unique form of Bhakti known as '**Eka-Sharana-Naam-Dharma**'.
- **Eka-Sharana-Naam-Dharma**, the foundation of this philosophy, rested on four key pillars: **deva (God), naam (prayers), bhokots (devotees), and guru (teacher)**.
  - Central to this belief was the assertion that all devotees were equal in the eyes of God, irrespective of caste (jaati).
  - It also challenged orthodox Brahmanical rituals, and move away from sacrificial practices.
- He emphasized prayer and chanting (naam) over idol worship, promoting a more direct and personal connection with the divine.
- Sankaradeva's extensive travels across the northern regions of the Indian subcontinent played a pivotal role in synthesizing and consolidating his religious philosophy.
- **Sattras emerged as central hubs for the dissemination of his ideas.**
  - These institutions, often built under the patronage of rulers such as the Ahom kings, became nodal points for the Neo-Vaishnavite *movement*.
- A significant aspect of Sankaradeva's approach was **use of the Assamese language, rather than Sanskrit**, to deliver his preachings, **making his ideas more accessible to a wider audience.**
- He also developed **new folk language called Brajavali, blending Brajbhasha and Assamese**, to express his artistic creations.
- He composed, **Kirtana-ghosha (collection of poetical works)**, praising Lord Krishna. It was designed for

communal singing, fostering a sense of community and shared devotion.

- The legacy of the Neo-Vaishnavite movement continued through **Sankaradeva's disciples, particularly Madhavdeva and Damodardeva**, thus, diversifying its impact on society and spirituality.

### ARCHITECTURE

- These constructions, comprising enclosed spaces, consist of multiple buildings and are characterized by four gateways.
- At the heart of the compound is the '**Naamghar**', the **most sacred structure, functioning as a congregational space or prayer hall.**
- The residential quarters, known as **haati/boha**, are constructed in the form of a row of interconnected huts, where **bhokots and members of the laity reside.**
- **The cho-ghar is a preparatory room**, serving as a dressing area for various occasions and festive performances such as Bhaona and Sattriya dances.

### ORGANISATION AND CULTURE

- Adhered to a **decentralized organizational structure, with Sattradhikar holding the primary officiating position.**
  - Sattradhikar, contrary to conventional expectations, **did not always hail from a high-born background.**
  - Historical records indicate instances where individuals of tribal or lower caste origins *occupied* this esteemed position.
- **Burhabhakats assumed leadership roles within household units.**
- **Bhokots, upon entering the sattrra**, renounce their homes and immerse themselves in the teachings of devotion and worship.
- Various functionaries play crucial roles within the Sattrra community.
  - **Pathak is responsible for imparting knowledge**, engaged apprentices through discussions and occasional debates.
  - During prayers, **Pathak recited from the Bhagwata Purana** and also read from texts like *the Baktiratnawali, Kirtan-ghosha, and Naam-ghosha.*

## HISTORY, HERITAGE &amp; CULTURE

- **Natuwas (skilled dancers) and Sutradharas (proficient actors)**, showcased performances such as Oja-Pali, Ankiya-Naat, Bhaona, Sattriya dance.
- **Sutradhara assumed a central role** in plays and dances, acting as the anchor.
- **Khanikars among the Bhokots**, create illustrations or miniature paintings for manuscripts.
- Khanikars produced masks essential for use in Bhaona performances.

**RELATIONSHIP WITH THE STATE**

- In the era of Ahom rule, Sattras experienced substantial support through donations in the form of land or financial contributions.
- Despite this, **Sattras maintained a distinct independence from political control.**
  - Unlike temples that often relied on patronage for sustenance, Sattras demonstrated **a unique self-sufficiency.**
  - They cultivated their own food and developed the means to sustain their communities, thereby not necessitating external support.
  - **This allowed Sattras to operate independently of external influences.**
  - This in turn, fostered an environment where their *religious* and cultural practices flourished.

**CULTURAL HERITAGE ASSOCIATED WITH SATTRAS****Sattriya Dance:**

- It is recognised as **one of the classical dances of India, that emerged in the 15th century A.D. in Assam.**
- It draws its roots from the ancient text '**Natya Shastra**' by sage **Bharat Muni** and is deeply influenced by the Bhakti Movement.
- It incorporates various dance styles prevalent in Assam, **particularly Ojapali and Devdasi**, with a strong emphasis on the devotional aspect.
- Narrates mythological stories of Lord Vishnu and encompasses Nritya, Nritya, and Natya, thus, blending both the graceful Lasya and the vigorous Tandava elements.

- Traditionally performed by male monks known as 'Bhokots' as part of their daily rituals or during festivals, it has also been embraced by women.
- **Instruments used: Khol (drum), Manjira/Bhortals (Cymbals) and flute.** The dance features compositions known as 'Borgeets,' authored by Shankaradeva.
- Two distinct streams are: **Gayan-Bhayanar Nach and Kharmanar Nach.**

**Ankia Naat or Bhaona:**

- It involves play or musical drama.
- Originally written in a mix of **Assamese and Maithili called Brajavali**, it narrates stories of Lord Krishna.

**Borgeet:**

- A collection of lyrical songs composed by **Sankardeva and Madhavdeva in the 15th-16th centuries**, set to specific ragas are used to commence prayer.
- Written in the distinct **Brajavali dialect**, these songs express religious sentiments.

**Ojapali:**

- An ancient shamanistic folk dance from Assam, has evolved from the **Kathakata tradition.**
- Performed in a group, it consists of songs, dialogues, gestures, improvised acting, and dramatization.
- The performance is led by an '**Oja**' and supported by **four or five 'palies,' continuously playing cymbals.**

**Gayan-Bayan:**

- A religious dance performed by Sattras, it involves singers ('**gayan**') and drummers ('**bayan**').
- Khols and cymbals are used in this dance.

## INTERNATIONAL MOTHER LANGUAGE DAY

#LANGUAGES #CULTURE

PRIMARY SOURCE THE HINDU

*UNESCO's celebration of International Mother Language Day, 2024, highlighted the importance of implementing multilingual education policies and practices as a pillar to the achievement of Sustainable Development Goal 4 which calls for inclusive, quality education and lifelong learning for all as.*

**HISTORY, HERITAGE & CULTURE**

**The theme for International Mother Language Day 2024 is "Multilingual education is a pillar of intergenerational learning".**

- International Mother Language Day is globally recognized **on 21 February**.
- **Aim:** Foster awareness of linguistic and cultural diversity while promoting multilingualism; preserving and protecting linguistic heritage.
- Originally introduced by **UNESCO on 17 November 1999**, its formal acknowledgment by the United Nations General Assembly came through the adoption of UN resolution in 2002.

**HISTORY**

- **21 February 1952 holds historical significance as the day Bengalis** in the then-Pakistani province of East Bengal (now Bangladesh) advocated for the recognition of their mother tongue, Bengali.
- The language movement emerged from the cultural and linguistic disparities between East and West Pakistan following the creation of Pakistan in 1947.
- **Despite Bangla being the predominant language spoken by the majority** encompassing both regions, Urdu was unilaterally declared the **sole national language in 1948**.
- The East Pakistan people protested since the majority of the population was from East Pakistan and their mother language was Bangla.
- **They demanded Bangla to be at least one of the national languages**, in addition to Urdu. The demand was raised first by **Dhirendranath Datta from East Pakistan on 23 February 1948**, in the constituent Assembly of Pakistan.

- Students at the University of Dhaka, supported by the general public, organized extensive rallies and meetings.
- On 21 February 1952, police fired upon the gatherings, resulting in the loss of lives.

**SIGNIFICANCE AND CELEBRATION**

- An individual's mother language, being the first language they acquire, often serves as a profound link to their home, identity, and cultural roots.
- However, the relentless **wave of globalization poses a threat** to linguistic diversity, with many languages facing the risk of extinction.
- The United Nations highlights the pressing issue of linguistic diversity facing escalating threats, leading to the gradual disappearance of numerous languages.
- **Digital influence plays a role in determining which languages remain relevant.**
- Consequently, out of the approximately **6000 languages spoken globally**, a **staggering 43% are categorized as endangered**.
- Alarming statistics reveal that currently, **40% of the world's population lacks access to education** in their native language.
- In certain regions, **this figure soars to an alarming 90%**, underscoring the urgency of addressing language-related disparities in educational access.
- The theme chosen for International Mother Language Day 2024, **underscores the pivotal role of education in preserving indigenous languages**.
- United Nations emphasizes that commencing education in the learner's mother tongue and progressively introducing **additional languages can effectively bridge the gap between home & school**.
- It is positioned as a strategy to enhance educational outcomes and as means to safeguard and promote **linguistic diversity, ensuring that languages, especially indigenous ones, continue to thrive and pass on through generations**.

**ANSWERS FOR QUESTIONS ASKED IN THE HINDU QUIZ SECTION**

**Q1. Which language became the second legally recognized classical language of India, following Tamil?**

Answer:

- **Recognition of Classical Languages:**

- In 2004, the Government of India accorded Classical Language status to Tamil.
- **In 2005, Sanskrit was recognized as a Classical Language of India, immediately following Tamil.**
- Kannada and Telugu were granted classical language status in 2008.
- Malayalam received classical language recognition in 2013
- In 2014, Odia was also honoured with the status of a Classical language.

**Q2. In which Indian state is Nepali an official language?**

Answer:

- Nepali an Indo-Aryan language native to the Himalayas **region** in South Asia.
- It holds the status of the official and most widely spoken **language** in Nepal, serving as a lingua franca.
- Nepali is also recognized as **an official language in the Indian state of Sikkim and the Gorkhaland Territorial Administration of West Bengal.**
- Additionally, it has speakers in states such as Arunachal Pradesh, Assam, Himachal Pradesh, Manipur, Meghalaya, Mizoram, and Uttarakhand.

## MARATHA FORTS NOMINATED FOR UNESCO WORLD HERITAGE LIST

#HERITAGEANDCULTURE

PRIMARY  
SOURCE THE HINDU

India has nominated the '**Maratha Military Landscapes**', comprising of **12 forts**, for **UNESCO World Heritage List (2024-2025)**. These forts showcase the military strength of Marathas.

### ABOUT THE NOMINATED FORTS

- Salher, Shivneri, Lohagad, Khanderi, Raigad, Rajgad, Pratapgad, Suvarnadurg, Panhala, Vijaydurg and Sindhudurg forts are situated in **Maharashtra**.
  - Gingee fort is in **Tamil Nadu**.
- Salher:**
- **Situated in Nashik district, Maharashtra**, holds **historical** significance.
  - Formerly known as **Gavalgarh**, Salher boasts the highest fort in **the Sahyadri mountains**, the **second highest peak in Maharashtra**.
  - In **1672**, Shrimant Sardar Suryajirao Kakade defended it against a Mughal attack.
  - Shivaji, recognizing the valour of Suryajirao Kakade, **ultimately secured victory in the Battle of Salher**.
  - The 18th century saw the fort passing through the hands of **the Peshwas** and later the British.
- Shivneri Fort:**
- Located near **Junnar in Pune district, Maharashtra**.
  - It is the **birthplace of Chatrapati Shivaji Maharaj**, the founder of the Maratha Empire.
  - **Originally under Yadavas of Devagiri**, Shivneri **guarded ancient trade route from Desh to Kalyan**.
  - Shivaji recaptured it in 1670, surrendering **briefly in 1665 due to the Treaty of Purandhar**.
- Lohagad:**
- Located near Lonavala, it has a rich history, with various dynasties **like the Chalukyas, Rashtrakutas, Yadavas, Bahamanis, Nizams, Mughals, and Marathas occupying it**.
  - Shivaji Maharaj captured it in **1648 but temporarily surrendered it in 1665**.
  - The fort served as a treasury for Shivaji's winnings from **Surat**.
  - A Jain inscription from the 2nd or 1st century BC was discovered in a cave on the fort in 2019, pointing to its **ancient** history.
- Khanderi:**
- **Officially Kanhoji Angre Island**, with its fort, is **located off the coast of Maharashtra**.
  - It played a crucial role in Shivaji's time, securing the **coastline against opponents like the Siddis**.
  - Shivaji's forces, led by Maynak Bhandari, occupied **Khanderi** in 1679.
  - The **British** later took control in **1818**, and **today it falls under the jurisdiction of the Indian Navy**.



## HISTORY, HERITAGE & CULTURE

- Old canons and Daud Pir's tomb, Khanderi offers a glimpse into Maharashtra's maritime history.

### Raigad:

- Situated within the Sahyadri range, Mahad, Maharashtra, stands as a formidable hill fort with a rich history.
- **Chhatrapati Shivaji Maharaj chose it as his capital in 1674.**
- It boasts structures like the Maha Darwaja, the king's court, and the Nagarkhana Darwaja.

### Rajgad:

- It is a prominent hill fort located in the Pune district of Maharashtra, India.
- Initially known as **Murumbdev**, it served as the **first capital of the Maratha Empire** under the rule of **Chhatrapati Shivaji**. Later, the capital was shifted to **Raigad Fort**.
- Chhatrapati Shivaji's son Rajaram I was born here.
- Moreover, **Rajgad was one of the 12 forts retained by Shivaji in the Treaty of Purandar in 1665.**

### Pratapgad:

- Situated in the **Satara district of Maharashtra**, near the **Mahabaleshwar hill station**.
- Constructed in 1656 under the supervision of Moropant Trimbak Pingle, Shivaji's prime minister.
- It is known for the **Battle of Pratapgad in 1659 between Shivaji and Afzal Khan**. The fort served as a key defence point for the **Nira and Koyna rivers**.
- It was surrendered to the **East India Company during the Third Anglo-Maratha War in 1818.**

### Suvarnadurg:

- Located between Mumbai and Goa on a small island in the Arabian Sea near Harnai in Konkan, Maharashtra.
- Built by Chhatrapati Shivaji Maharaj in 1660.
- **Suvarnadurg served as a defence against European colonialists and local chieftains.**
- Connected to **another land fort called Kanakadurga**, Suvarnadurg was strategically established to counter enemy attacks.
- It housed a shipbuilding facility.

### Panhala Fort:

- Panhalgad/Panhalla/Panhala, is located near **Kolhapur in Maharashtra.**

- **Positioned strategically to overlook a pass in the Sahyadri mountain range**, it played a central role in skirmishes involving the Marathas, Mughals, and the British East India Company.

- **Built between 1178 and 1209 CE by the Shilahara ruler Bhoja II.**

### Vijaydurg:

- **The oldest fort on the Sindhudurg coast, was initially constructed during the reign of Raja Bhoja II of the Shilahar dynasty.**
- Later restructured by Chhatrapati Shivaji Maharaj.
- Located on the **Arabian Sea coast in Maharashtra**, **Vijaydurg served as a significant base for Maratha warships and earned the nickname 'Eastern Gibraltar' for its impregnability.**
- Captured by the Marathas, Mughals, Carnatic Nawabs, it ultimately fell under British control in 1818.

### Sindhudurg Fort:

- Commissioned by Chhatrapati Shivaji between 1664 and 1667, it is situated near the Konkan region of Maharashtra.
- Countered the influence of European merchants along the Konkan coast.
- It stands as a protected monument under the Archaeological Survey of India.

### Gingee Fort:

- It is also known as **Senji Fort, located in Tamil Nadu.**
- Fortified extensively to be considered the **'most impregnable fortress in India' by Shivaji**, it earned the title **'Troy of the East' by the British.**
- Originally built by **Ananta Kon around 1190 AD and later modified in the 13th century**, Gingee Fort saw various rulers, including the Marathas, Mughals, Carnatic Nawabs, French, and the British.
- The fort complex is situated on three hillocks, **Krishnagiri, Rajagiri, and Chakilidurg.**
- It is administered by Archaeological Survey of India.

### REPRESENTING EXTRAORDINARY FORTIFICATION AND MILITARY SYSTEM

- Maratha Military ideology developed during the **17<sup>th</sup> century period, primarily during the reign of Maratha king Chhatrapati Shivaji Maharaj from 1670 CE** and continued to be an integral ideology during the rule of **the Peshwas till 1818 CE.**

## HISTORY, HERITAGE & CULTURE

- The network of forts developed by Marathas, which varied in hierarchies, scale and typological features, is basically the result of integrating the landscape, terrain and physiographic characteristics, which were **distinctive to the Sahyadri mountain ranges, the Konkan coast, Deccan Plateau and the Eastern Ghats in the Indian Peninsula.**
- In Maharashtra, there are more than **390 forts.**
- Out of the nominated forts, **8 are protected by the Archaeological Survey of India (ASI): Shivneri, Lohgad, Raigad, Suvarnadurg, Panhala, Vijaydurg, Sindhudurg and Gingee forts.**
- **4 are under the protection of the Directorate of Archaeology and Museums, Government of Maharashtra,** these are **Salher, Rajgad, Khanderi fort and Pratapgarh.**
- Salher fort, Shivneri fort, Lohgad, Raigad, Rajgad and Gingee fort are **hill forts**; Pratapgad is **hill-forest fort**, Panhala is **hill-plateau fort**, Vijaydurg is **coastal fort** whereas Khanderi fort, Suvarnadurg and Sindhudurg are **island forts.**

### NOMINATION

- The nomination made by Ministry of Culture is in the category of Cultural Property.
- **Two categories** of nomination for inclusion in World Heritage List.
  - cultural and natural criteria;
  - *Criteria (1 to 6) are for cultural sites;*
  - *Criteria (7 to 10) are for natural sites;*
- **Maratha Military Landscapes of India is nominated under:**
  - **Criterion (3):** To bear a unique or at least exceptional testimony to a cultural tradition or to a civilization that in living or which has disappeared;
  - **Criterion (4):** To be an outstanding example of a type of building, architectural or technological ensemble, or landscape that *illustrates* significant stage(s) in human history; and
  - **Criterion (6):** To be directly or tangibly associated with events or living traditions, with ideas or with beliefs, with artistic and literary works of outstanding universal significance.
- **Maratha Military Landscapes of India were included in the Tentative List of World Heritage sites in 2021.**

### TENTATIVE LIST PROCESS

- **States Parties are encouraged to submit their Tentative Lists**, properties which they consider to be cultural and/or natural heritage of outstanding universal value.
- **States Parties should submit Tentative Lists**, at least one year prior to the submission of any nomination.
- **States Parties are encouraged to re-submit their Tentative List at least every ten years.**
- Nominations to the World Heritage List will not be considered unless the nominated property has already been included **on the State Party's Tentative List.**

### Selection of Heritage sites:

- **State parties create a list of potential sites from which they nominate candidates for inclusion on the World Heritage List.**
- Nominations, accompanied by comprehensive conservation plans, are submitted to the **UNESCO World Heritage Centre.**
- **UNESCO World Heritage Centre** offers support for the nomination process, including documentation and formatting.
- After reviewing the submitted documents, it forwards them to advisory bodies.
  - *International Council on Monuments and Sites (ICOMOS)*
  - *World Conservation Union (IUCN)*
  - *International Centre for Study of The Preservation and Restoration of Cultural Property (ICCROM)*
- **World Heritage Committee** annually determines which sites will be inscribed on World Heritage List.

### UNESCO WORLD HERITAGE SITES IN INDIA

- **42 UNESCO World Heritage Sites:**
  - *Cultural sites- 34*
  - *Natural sites- 7*
  - *Mixed sites- 2*
- **Shantiniketan: 41st UNESCO World Heritage Site in India**
- **Inscription of 13th-century sacred ensemble of temples of Hoysala rulers**, famous temples of Belur, Halebid and Somananthpura in Karnataka are the 42nd.

## DISCOVERY OF TEMPLES IN TELANGANA SHOWS SPREAD OF CHALUKYAS

#CULTURE #TEMPLES #CHALUKYASOFBADAMI

PRIMARY  
SOURCE

THE HINDU

*An excavation was undertaken, in Telangana, in the village of Mudimanikyam on the banks of river Krishna, which was part of the kingdom ruled by Badami Chalukyas.*

### MORE INFORMATION

- After the end of the Kingdom (ruling present-day **Karnataka and Andhra Pradesh**), Mudimanikyam, continued to have a thriving community, believing in the Hindu gods of Vishnu and Shiva.
- As per the new discovery, **Jogulamba temples at Alampur and submerged Yeleswaram sites in Telangana**, are evidences that show the reach of **Chalukya Badami kingdom (ruling from 543 AD to 750 AD)**.
- An inscription dating to the rulers of Badami Chalukyas was also discovered.
- The discovered temples highlight '**Deccan cosmopolitanism**' where there was space for more than two religions to co-exist. Along with **Brahmanical religion**, there was space for **Buddhism and Jainism** to flourish.

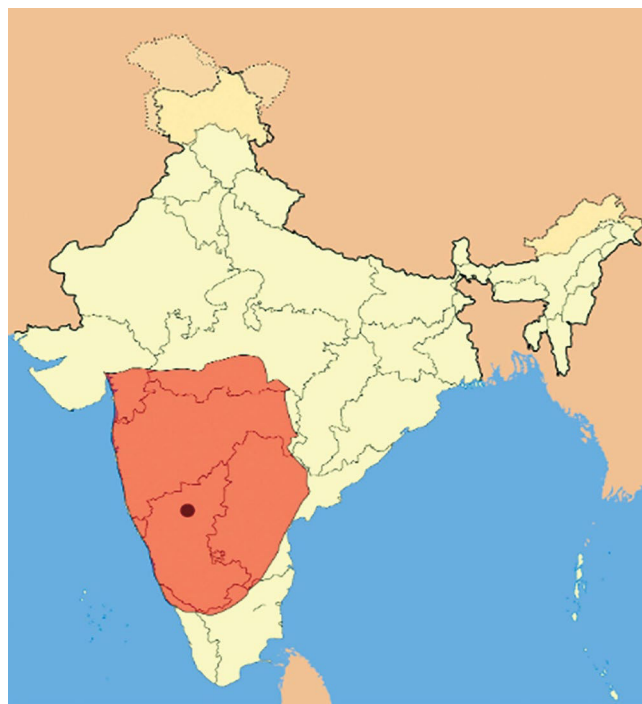
### CHALUKYAS OF BADAMI

- Chalukyas ruled over the Deccan plateau in India for over 600 years.
- During this period, they ruled as three closely related, but individual dynasties.
  - **Chalukyas of Badami** (also called Early Chalukyas), who ruled between the 6th and the 8th century.
  - **Chalukyas of Kalyani** (also called Western Chalukyas or Later Chalukyas)
  - **Chalukyas of Vengi** (also called Eastern Chalukyas).

#### Badami Chalukyas:

- In the 6th century, with the decline of Gupta dynasty and their immediate successors in northern India, major changes were seen in the areas south of **Vindhya, Deccan and Tamilakam**.
- The age of small kingdoms had given way to large empires in this region.

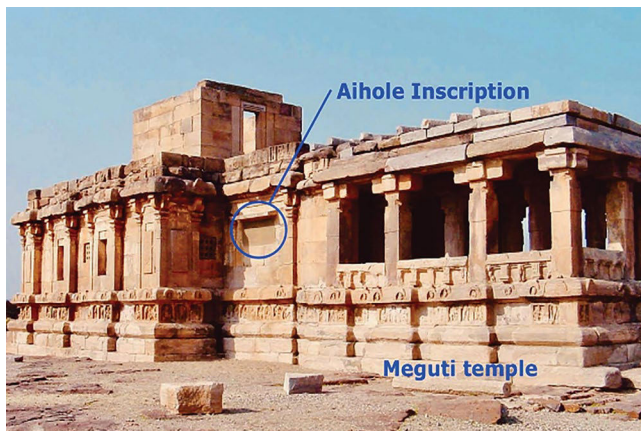
- **Chalukya dynasty** was established by **Pulakeshin I** in 543.



- Chalukyas of Badami, ruled over an empire that comprised the **entire state of Karnataka and most of Andhra Pradesh in the Deccan**.
- At their peak, the Chalukyas ruled a vast empire stretching from **the Kaveri in the south to the Narmada in the north**.
- **Pulakeshin I** took **Vatapi (modern Badami in Karnataka)** under his control and made it his **capital**.
- **Pulakeshin II, commanded control over the entire Deccan** and is perhaps the most well-known emperor of the Badami dynasty.
  - Pulakeshin II **extended the Chalukya Empire up to the northern extents of the Pallava kingdom**.
  - He **halted the southward march of Harsha** by defeating him **on the banks of the river Narmada**.
  - **Pallava Narasimhavarman, in 642**, attacked and occupied **Badami temporarily**. **Pulakeshin II, died in the battle**.
  - **Aihole inscription/prashasti, is a Sanskrit inscription at Meguti Jain temple in Aihole, Karnataka**.
  - The eulogy dated 634–635 CE, was composed by the **Jain poet Ravikirti in honour of his patron king Pulakesin Satyasraya (Pulakeshin II)**.

## HISTORY, HERITAGE &amp; CULTURE

- The dynasty went into a brief decline following death of Pulakeshin II due to internal feuds. **Badami was occupied by Pallavas for a period of thirteen years.**
- It recovered during the **reign of Vikramaditya I, who succeeded in pushing the Pallavas out of Badami and restored order to the empire.**
  - **Vikramaditya I took the title 'Rajamalla'.**
- The empire was its peak again during the **reign of Vikramaditya II (733–744).**
  - **He is known for his repeated invasions of the territory of Tondaimandalam** (*historical region located in the northernmost part of Tamil Nadu and southernmost part of Andhra Pradesh*).
  - He **defeated Pallava Nandivarman II, and thus, avenged the earlier defeat of the Chalukyas by the Pallavas.** He engraved a *Kannada inscription on the victory pillar at the Kailasanatha Temple, in Kanchipuram.*
  - **Vikramaditya II later overran other traditional kingdoms of Tamil country, Pandyas, Cholas and Cheras in addition to subduing a Kalabhra ruler.**
- Last **Chalukya king, Kirtivarman II, was overthrown by the Rashtrakuta king Dantidurga in 753.**

**Architecture:**

- Their style of architecture is called 'Chalukyan architecture' or 'Karnata Dravida architecture'.
- The building material they used was a **reddish-golden Sandstone.**
- The temple building activity was mostly concentrated in a relatively small area within, **Aihole, Badami, Pattadakal and Mahakuta** in modern Karnataka state.

**TEMPLE BUILDING ACTIVITY CAN BE CATEGORISED INTO DIFFERENT PHASES**

**1. Early phase began in the last quarter of 6th century:**

- Cave temples developed at Aihole (*one Vedic, one Jain and one Buddhist*), followed by four developed cave temples at Badami (*of which cave 3, a Vaishnava temple, is dated accurately to 578 CE*).
  - The Vedic temples sculpted images of **Mahishasuramardhini, Varaha, Vishnu seated on Anantha (the snake) and Nataraja (dancing Shiva).**

**2. Second phase of temple building was at Aihole and Badami:**

- 70 structures exist at Aihole and has been called one of the cradles of Indian temple architecture.
  - Lad Khan Temple (dated to 450 but more accurately to 620).
  - Meguti Jain Temple, shows progress in structural design.
- The structural temples at **Pattadakal, built in the 8th century and now a UNESCO World Heritage Site,** marks the **culmination and mature phase of Badami Chalukyan architecture.**
  - There are **ten temples at Pattadakal, six in southern dravida style and four in the northern nagara style.**
  - Well known are the **Virupaksha Temple (740–745) and the Mallikarjuna Temple (740–745) in the southern style.**

**ATTUKAL PONGALA**

#FESTIVALSININDIA

PRIMARY  
SOURCE THE HINDU

Women celebrated the Attukal Pongala festival by making the ritual offering to the presiding deity of the Attukal Bhagavathy temple in Thiruvananthapuram, Kerala.

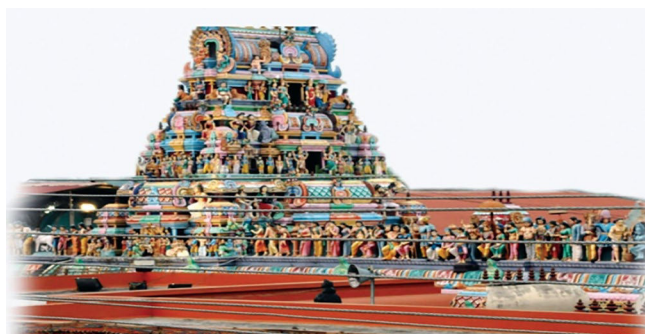
**MORE INFORMATION**

- The temple, Attukal Bhagavathy temple is also known as '**Women's Sabarimala**', since women form the major portion of the Devi's devotees.
- '**Attukal Pongala**' includes rituals such as, **lighting of the 'Pandara Aduppu', the main hearth of the temple.** After this, ritual offering is cooked by the women.



**HISTORY, HERITAGE & CULTURE**

- The presiding deity, **Attukal Bhagavathy**, is the **divine incarnation of Kannaki**, the protagonist of the Tamil epic, **Silappadhikaram**.
- The story is that after **destroying Madurai** to avenge the injustice done to her husband Kovalan, **Kannaki reached Kerala, and took rest at Attukal**.
  - **Silappadhikaram is the earliest Tamil epic.**
  - It is a poem of 5,730 lines describing the tragic love story of an ordinary **Kannaki and her husband Kovalan**. The epic is set in a flourishing seaport city of the early Chola kingdom.
  - **Author:** It is attributed to a **prince-turned-Jain monk Illango Adigal** (brother of Chera king, Senguttuvan) and was probably composed in **the 5th or 6th century CE**.

**ATTUKAL BHAGAVATHY TEMPLE**

- The Attukal Bhagavathy Temple is a Hindu religious shrine in Kerala, India.
- **Goddess 'Attukal devi'**, is the supreme mother, goddess of power and courage.

- She is often referred as **Kannaki, the heroine of Ilanko Adikal's 'Silappadhikaaram'**.
- A festival that has figured in the Guinness Book of World Records for being the single largest gathering of women for a religious activity, **the Attukal Pongala continues to draw millions of women with each passing year**.
- Attukal Temple is situated near Sree Padmanabhaswamy Temple, in Thiruvananthapuram.

**ATTUKAL PONGALA**

- Attukal Pongala Mahotsavam is a 10 days festival which falls on **February-March every year**.
- The festival begins with the **traditional Kappukettu and Kudiyiruthu ceremony**, in which, the idol of Devi, is **embellished with Kappu (Bangles)**.
- Ninth day of the festival, **'Pooram day'** is the major attraction.
- **Pongala/Naivedyam** (rice cooked with jaggery, ghee, coconut as well as other ingredients) is prepared in the open in small pots to please the Goddess Kannaki

**PRACTICE QUESTIONS****MCQS**

**Q1. Consider the following statements with reference to the folk dances in India:**

1. The use of masks in performances is an important element of Purulia and Mayurbhanj Chhau.
2. Mohri, Kharkai and Dhumsa are the musical instruments used in the performances of Chhau.

3. The variety of mask used in Purulia Chhau has been officially recognized under Geographical Indications.

How many of the statements given above is/are incorrect?

- |               |              |
|---------------|--------------|
| (a) Only one  | (b) Only two |
| (c) All three | (d) None     |

**Q2. Consider the following statements with reference to the period of Mughal empire in India:**

1. At Ibadat Khan in Fatehpur Sikri, Akbar established the syncretic faith known as 'Din-e-Ilahi.'
2. Buland Darwaza was added to Fatehpur Sikri complex after Jahangir's victory over Mewar.

Which of the statements given above is/are correct?

- |                  |                     |
|------------------|---------------------|
| (a) 1 only       | (b) 2 only          |
| (c) Both 1 and 2 | (d) Neither 1 nor 2 |

**Q3. Consider the following statements:**

1. Kokborok language is spoken primarily by the tribal communities across the Central region of India.
2. Kokborok is one the twenty-two languages mentioned in the Eighth schedule of the Constitution.
3. Originally, Kokborok language was written in the 'Koloma' script.

How many of the statements given above is/are incorrect?

- |               |              |
|---------------|--------------|
| (a) Only one  | (b) Only two |
| (c) All three | (d) None     |

**Q4. Consider the following statements with reference to the religious and cultural history of India:**

1. The relics of Sariputta, who was Lord Buddha's disciple, was enshrined and preserved at Devni Mori.
2. 'Saririka stupas' are considered as the earliest surviving Buddhist shrines in India.
3. The 'Kapilavastu relics' of Lord Buddha, belonged to the Licchavi clan of Vaishali.

How many of the statements given above is/are correct?

- |               |              |
|---------------|--------------|
| (a) Only one  | (b) Only two |
| (c) All three | (d) None     |

**Q5. With reference to the heritage and culture of India, consider the following statements:**

1. Gingee fort in Tamil Nadu was first built during the reign of Maratha ruler Shivaji in 1677 AD.
2. Raigad and Sindhudurg fort in Maharashtra are the UNESCO-Recognised World Heritage sites in the category of Cultural Property.

Which of the statements given above is/are correct?

- |                |                     |
|----------------|---------------------|
| (a) 1 only     | (b) 2 only          |
| (c) Both and 2 | (d) Neither 1 nor 2 |

**Q6. Consider the following statements with reference to the Chalukyas of Badami:**

1. The Chalukyas of Badami established their control over the territories from the Kaveri in the south to the Narmada in the north.
2. 'Aihole Prashasti' at the Meguti Jain temple, was written to honour the ruler Vikramaditya II (733-744).

Which of the statements given above is/are correct?

- |                  |                     |
|------------------|---------------------|
| (a) 1 only       | (b) 2 only          |
| (c) Both 1 and 2 | (d) Neither 1 nor 2 |

**Q7. With reference to the religious and cultural history of India, consider the following statements:**

1. Attukal Bhagavathy temple in Kerala is described as the 'Sabarimala of Women'.
2. The presiding deity in the Attukal Bhagavathy temple is associated with the epic 'Silappadhikaram'.
3. 'Silappadhikaram', the earliest Tamil epic, was composed by Seethalai Sattanar.

How many of the statements given above is/are incorrect?

- |               |              |
|---------------|--------------|
| (a) Only one  | (b) Only two |
| (c) All three | (d) None     |

## DESCRIPTIVE QUESTIONS

- Q1.** Examine the religious policy implemented by Mughal Emperor Aurangzeb and analyze its far-reaching implications on the overall framework of the Mughal Empire.
- Q2.** Discuss the significant contributions of Sankardeva (1449-1596) to the Bhakti movement and assess the profound influence of his initiatives on the cultural development.

**Answers:** 1-a, 2-a, 3-b, 4-a, 5-d, 6-a, 7-a

## **PART TWO**

# **ETHICS, INTEGRITY & APTITUDE**

**Coverage from varied sources**

# RESOLVING ETHICAL DILEMMAS BETWEEN COMPETING FUNDAMENTAL RIGHTS: SUPREME COURT SHOWS THE WAY FORWARD

#ETHICS IN GOVERNANCE

In the recent judgment of **ADR vs. Union of India**, the Supreme Court used the **doctrine of proportionality** to resolve the dilemma occurring between various competing sets of rights. In this context, let us understand the concept of **ethical dilemmas**, how dilemmas manifest in decision-making, and how to resolve the dilemmas when there are competing fundamental rights.

## WHAT IS AN ETHICAL DILEMMA?

An ethical dilemma is a situation where a person is faced with competing or conflicting moral principles or values, making it difficult to determine the right course of action. In such scenarios, there may be no clear-cut solution that satisfies all ethical principles, and individuals may find themselves caught between competing choices, each of which has its own moral implications.

## ETHICAL DILEMMAS IN DECISION-MAKING:

**While making decisions, when there are conflicting values, interests, or principles involved, ethical dilemmas can arise. Here are a few ways they can arise:**

- **Conflicting principles:** When fundamental moral principles clash, such as honesty vs. loyalty or autonomy vs. beneficence.
- **Competing interests:** When there is a need to balance the needs of different stakeholders, like employees, customers, and shareholders, it can create dilemmas where satisfying one group may harm another.
- **Uncertain consequences:** When there is no certainty about the outcomes of our choices, making it challenging to determine the most ethical course of action.
- **Cultural differences:** Dilemmas arise when decision-makers from diverse cultural backgrounds have conflicting views on ethical behavior.
- **Limited resources:** Scarcity of resources can create dilemmas when decision-makers must allocate

resources among competing needs, for example, distributing medical treatments in hospitals.

## **Ethical dilemmas in governance:**

- **Conflicts of Interest:** When personal interests clash with duties to serve the public good. For example, a public official may have financial interests in a policy decision that could benefit them personally but harm the broader community.
- **Transparency and Accountability:** Balancing the need for transparency with the necessity to protect sensitive information can pose ethical dilemmas. Civil servants have to decide how much information to disclose to the public while ensuring accountability for their actions.
- **Resource Allocation:** While distributing limited resources, such as funds or services, among competing needs can present ethical dilemmas. Civil servants have to decide how to prioritize spending to maximize societal benefit while considering the needs of various stakeholders.
- **Balancing Individual Rights and Public Safety:** Government actions aimed at ensuring public safety, such as surveillance measures or restrictions on civil liberties, can raise ethical dilemmas concerning individual rights and freedoms. Striking the right balance between security and civil liberties is a perennial challenge for policymakers.
- **Environmental Sustainability:** Environmental issues often involve making decisions that balance economic interests with long-term environmental sustainability. Ethical dilemmas arise when governments must weigh the immediate benefits of development projects against the long-term harm to the environment and future generations.

## IN CASE OF JUDICIAL DECISION-MAKING:

- **Conflict of Constitutional Values:** Governance involves steering conflicts between different



constitutional values or their varied interpretations. Written Constitutions establish a hierarchy of rights, where certain fundamental rights take precedence over others.

- For example, Article 25 guarantees freedom of conscience and religion but is subject to other provisions such as public order and morality. Here, courts must ascertain hierarchies among conflicting rights and utilize judicial tools to balance them.
- **Judicial Approach towards balancing the rights:** Courts have developed various standards over time to balance conflicting fundamental rights.
- Standards include the collective interest/public interest standard, single proportionality standard, and double proportionality standard.

#### **ETHICAL ISSUES IN ELECTORAL BOND SCHEME:**

Since its inception, the Electoral Bond Scheme in India raised significant ethical concerns which were highlighted by the Supreme Court.

- **Lack of transparency:** Donors can contribute anonymously, making it hard to trace funding sources and increasing the risk of corruption.
- **Potential for quid pro quo:** Anonymity may lead to parties favoring wealthy donors, likely at the expense of public interests.
- **Unequal playing field:** Larger parties with access to significant donations may gain an advantage, subsequently marginalizing smaller parties relying on grassroots support.
- **Lack of accountability:** Without disclosure requirements, it's challenging to hold parties responsible for their funding sources, undermining democratic principles.

- **Potential misuse:** Anonymity could facilitate illicit activities like money laundering, threatening the integrity of elections and democratic governance.

#### **ETHICAL DILEMMAS FACED BY THE SUPREME COURT IN DECIDING THE ELECTORAL BOND SCHEME:**

- Whether to uphold the right to privacy of the individuals contributing to the scheme or to uphold the right to have free and fair elections.
- Balancing the right to information and the right to informational privacy.

#### **RESOLUTION OF ETHICAL DILEMMAS:**

To resolve these dilemmas, the Supreme Court used the double proportionality test.

- **Double proportionality test** is used when one fundamental right is directly competing with the other fundamental right, for example, the right to information and the right to privacy, and to determine whether the State has used the "least restrictive" method to realize both rights.
- It was found that the restrictive means test of the doctrine of proportionality is not satisfied and that there are other means other than electoral bonds to achieve the purpose of curbing black money, even assuming it to be a legitimate objective.
- **Restrictive means test** requires that the measure taken to restrict a fundamental right (a) has a legitimate goal, (b) is a suitable means of reaching that goal, (c) creates the least amount of restriction possible on the fundamental right, and (d) does not have "a disproportionate impact on the right holder.
- Since the Electoral Bond Scheme could not satisfy these tests, the Supreme Court struck down the Electoral Bond Scheme terming it unconstitutional."

## CASE STUDIES FOR PRACTICE

MAINS GS PAPER IV

**Case Study 1:** You are appointed as an officer in the Environment Ministry of a state, with the responsibility to ensure compliance with the environmental laws and their follow-up. Immediately after the appointment, you gathered the data on the clearance granted under the relevant environmental laws in the state in the last year. You found that a large number of small and medium industries have been granted clearance. So, you decided to inspect this category first.

During your inspection, you discover that the majority of these industries are violating environmental laws. Most of the industrial units have got Environmental Clearance Certificates in their possession. But, in practice, most of these units remain to be polluting units in several ways, like air, water and soil pollution. The local resources, like ponds, lakes and rivers are getting polluted. Various reports have highlighted huge biodiversity loss. The local people encountered persistent health problems.

However, it is also true that these industries employ a huge number of workers, including migrant workers. In fact, the local economy of the area is based on these small and medium industries.

You took action against some heavily polluting industries. You also issued notices to all the industrial units to apply for a fresh Environmental Clearance Certificate from the competent authority. You gave a strict warning that failure to comply with the laws will result in the closure of the industry.

The issuance of notices resulted in a hostile response from a section of the industrial units, other vested interest persons and a section of the local politicians. The workers also became anxious, as they felt that your action would lead to the closure of these industrial units and result in loss of employment. The labour union sent you a representation requesting against the closure of the units. Simultaneously, you started receiving anonymous threats.

You, however, received support from some of your colleagues, environmentalists and some citizens' forums. They urged you to act strictly against the violators to protect the environment. (250 words)

- (a) What are the ethical dilemmas that you faced in exercising your option?
- (b) What are the different attitudes shown by various stakeholders in the case?
- (c) What are the options available to you under the given situation?
- (d) Critically examine the options listed by you.
- (e) What type of mechanism would you suggest to ensure environmental compliance?

**ANS.**

**(a) Ethical dilemmas faced include:**

- Objectivity vs Empathy: An implementing officer must shut down polluting industries which violate law. But it is human nature to be empathetic towards suffering of workers.
- Economic growth vs environmental protection: Growth comes at a cost, but here the cost is overbearing.
- Integrity/courage vs fear of Hostile threats.

**(b) Different attitudes shown by various stakeholders:**

- (i) Apathetic attitude towards environment and health of people shown by industries owner.
- (ii) Attitude of lack of respect for law.
- (iii) Hostile and greedy attitude by some industrialists who are threatening me.
- (iv) Democratic and cooperative attitude by some seniors and NGO.

**(c) Option available to me:**

- (i) Don't take any action considering workers' livelihood.
- (ii) Quit job or seek transfer to other departments.
- (iii) Facilitate fulfilment of environmental obligations within short period.
- (iv) Take action against industries and simultaneously support workers to seek alternate employment.

**(d) Critical evaluation of options:**

- (i) Don't take any action considering worker's livelihood.

## ETHICS, INTEGRITY & APTITUDE

- **Pros:** Ensures Right to livelihood of workers. Boost industries in the region. No abrupt change in economy.
  - **Cons:** Violation of rule of law. Compromise on right to live in healthy environment. Lack of trust on Environment Ministry.
- (ii) Quit job or seek transfer to other departments.
- **Pros:** Officer who will replace me may be more diligent to solve the issue. Can escape crisis of conscience.
  - **Cons:** Dereliction of my duty. Violation of civil service value of integrity and courage.
- (iii) Facilitate fulfilment of environmental obligations within short period.
- **Pros:** Livelihood of workers' will be secured and also pollution is controlled.
  - **Cons:** Companies may not be willing to change their method of operation.
- (iv) Taking strict action against industries
- **Pros:** Enforces rule of law, objectivity, environmental ethics, ethical governance.
  - **Cons:** Setback to MSME industry, migrant workers may lose jobs. Shortage of products would affect consumers. Increase in hostility towards me by the industries.

### (e) Mechanism to ensure environmental compliance:

#### Inner control

- Integrity pact, trusting conscience of people.
- Self-declaration on fulfilment of procedure.
- Use of technology to monitor pollution levels.

**Bio-centrism concept** to make people realise importance of environmental conservation.

- Providing alternative employment in less polluting industries.

#### Good governance:

- Environment ministry must make compliance procedure easier. A nodal officer must help in the process.
- If industries fail to reform effectively, they could be ordered to close.

- Producers pay principle must be strictly enforced. I would appeal to NGT to direct the industries to pay compensation for worker's and local population.
- Encouraging local NGOs to spread awareness regarding pollution and its effects on health.

**Case Study 2:** You are a new employee in the Human Resource Department of a reputed marketing firm. The firm provides many perks to the employees, since their job involves much travelling and making phone calls etc. You observe that many of the employees are misusing these perks. Some employees are fixing personal appointments in the garb of travelling for the company, while some others utilize the office phone and computers for personal reasons.

You find such behaviour unethical, but the colleagues are of the opinion that since the employees spend a good amount of time in the office during the weekdays, it is acceptable to engage in some personal work too.

Consider the following options separately and evaluate each of them: **(250 words)**

- Ignoring the issue altogether.
- Reporting the matter to the departmental head.
- Strict monitoring of the employees for such unethical behaviour.
- Issuing warning to the employees.
- Dismissing the employees who are found to be engaged in such activities on a regular basis.

#### ANS.

The case study involves scenario wherein fresh recruit is encountering some unprofessional behaviours in an organization, and tests the courage to hold on to ethical principles without getting absorbed in professionally corrupt practices.

#### Ethical issues involved

- Misusing professional privileges for personal convenience
- Lack of accountability in organizational setup
- Staying ethical while maintaining good professional relationships within organization.

#### Various options

**Option-1:** Ignoring the issue altogether.

This is not preferred solution as this will keep incentivizing employees to misuse the perks for their own benefits. If all employees display such attitude, it breaks accountability and results in lack of efficiency and productivity.

**Option-2:** Reporting the matter to departmental head.

This might result in you being alienated by colleagues, but this is a sound ethical action. If we assume that departmental head doesn't misuse his perks, he has the moral authority to initiate necessary actions including issuance of guidelines for using the perks, monitoring of employees etc. But he will not be able to regulate or address misuse of perks by those above him in the hierarchy.

**Option-3:** Strict monitoring of employees for such unethical behaviour.

The company management can definitely monitor and hold employees accountable for violation of ethical behaviour. But this should be done in reasonable manner. Overarching surveillance over employees might tend to deteriorate free working environment and violate their privacy.

**Option-4:** Issuing warning to employees.

Although the company can issue warning, it shall not sound like hostile document especially when lot of employees are involved in misuse of perks. The company has to look for prudent alternative that doesn't hamper the employee-employer relationship. E.g., Company can record violations of perks by employee on the annual employee report

and link it to salary hikes, promotions etc.

**Option-5:** Dismissing employees engaged in such activities on a regularly.

Dismissal should be last resort and that too for repeated violations of serious nature.

Hence, it is important is to inculcate healthy organizational value. For this, it is better to create facilitating environment which shall include training, regular interaction with top level management etc. Further, there has to be clear demarcation between trivial issues and serious ethical violations.



## **PART THREE**

# **ESSAYS OF THE MONTH**

**Selected essays from Rau's GSI students**

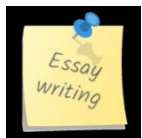
# THE TEST OF TOLERANCE COMES WHEN WE ARE IN MAJORITY; THE TEST OF COURAGE COMES WHEN WE ARE IN A MINORITY.

#PHILOSOPHICAL

SUBMITTED BY: OISHANI SARKAR

**Disclaimer:** The viewpoints in the topic are strictly personal of the writer above. The role of Rau's IAS Study Circle is to present the write-up in its original form, hence the study circle neither endorses nor rejects any viewpoint in the submission. The purpose is only to showcase the manner of writing.

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When in the majority, we often tend to take decisions which serve our interests but may prove to be detrimental to the interest of others. 'Tolerance' doesn't imply abandoning our thought process; it means making room for others' freedom of expression. As Voltaire rightly said, 'I disapprove of what you say but I will defend to the death your right to say it'.

On the other hand, according to Plato's cardinal virtues, courage refers to the ability to do justice. When in minority, we fear the outcomes and the repercussions that follow the actions.

The test of tolerance and courage stand on the premises of impartiality and integrity respectively. The group conformity effect is a challenge to both tests. When we are in majority – be it power or strength in numbers, we are inclined to use our powerful position to exploit situations to our advantage. E.g., when bills are passed through voice votes by the Parliament, without taking into consideration the views of the minority. It is perceived that the ruling party was intolerant of the views of others. Similarly, the test of courage calls for commitment towards intellectual integrity.

Minorities are easier to oppress by the majority members. People tend to conform to the demands of the latter and forego their thoughts. For instance, IES officer Satyendra Dubey relentlessly raised his voice against the corruption collusion in the Golden Quadrilateral project. Despite

being one of the very few persons to protest against the wrong, no number of threats could deter him from his goal.

On turning the pages of history, we see the remarkable example of the Mughal ruler – Akbar. His values of religious tolerance are relevant to date. He abolished the pilgrimage tax of Hindus and the Jizya tax. He believed that such taxation demeaned the stature of other religions. His principle of 'Sulah-i-Kul', harmonious relationships among all, upheld the values of tolerance and fraternity. Although he had all the powers, he stood the test of tolerance with grace and dignity.

Further, the beginning of the Indian freedom struggle reminds us about the test of courage when we stand in minority. The awareness among the masses about British exploitation was brought in by the few educated Indians. They showed courage to speak against oppressive colonial rule through the press and pamphlets. Defying their rule, the fighters did not beg down under the pressure.

Similarly, the social reformers stood firm on their ground to reverse the historical evils prevailing in society. Raja Rammohun Roy was the only one to revolt against the exploitation of women under the garb of the 'Sati' system. Despite being alone, the protests by the orthodox Brahmanical society could not stop him from repealing the law. The passing of such a test of courage proves our loyalty towards our constitution.

Now, if we look into the political dimension, we see many cases of intolerance that have cropped up in yester years. The misuse of section 124A of the Indian Penal Code to gag the voices of protest by a section of politicians has raised concern nationwide. Moreover, states like Tamil Nādu and West Bengal are facing a tussle between the Governor and the Chief Minister. Parochialism in the

outlook is raising questions on the sustainability of cooperative federalism.

This happens mainly because most powers are with the Central Government and the Governor is seen as an agent of the Centre by the state. Although it's not true, sadly the level of tolerance among both comes down and ego play comes in between, hampering the federal structure, we need seamless patience, respect and willingness to consider bridging the increasing gap of intolerance.

Furthermore, in the sphere of international relations, India has shown the courage to stand apart even when no major power supported her. During the cold war era, India along with Egypt, Indonesia, Ghana and Yugoslavia formed the Non-aligned Movement, declaring its independent stand from any power bloc. Its principles remained intact irrespective of any international pressure.

Presently, in the context of the Russia – Ukraine war, India abstained from voting against Russia. Despite pressures from Europe and USA, her display of valour on an international platform has awarded her a unique position in global politics. Replying to the Western criticism, S. Jai Shankar has said, 'I am not sitting on the fence just because I don't agree with you. It means I am sitting on my ground.'

On a different note, when we glance through our society, we see declining tolerance for women. This has become evident through the increasing number of serious crimes against women, unequal work pays, refusal to grant maternity leaves, etc. Patriarchy is strengthening its roots

in the form of selective sex abortion, domestic violence and so on. At this juncture, the test of tolerance is required on the part of men so that women get equal access to benefits. Women require to excel in the test of courage. So that they can use the law and get justice through constitutional means.

However, such prejudice and stereotypes are not restricted to women alone. With the abrogation of section 377 in the Navtej Singh Johar case, the rights of the LGBT community have come to light. The narrow outlook towards this community has been conclusively proven by the rampant discrimination against them. To establish an inclusive society, we need to be more tolerant and cooperative towards such minority and vulnerable sections of our society.

Moreover, the ruthless use of the environment has posed a challenge to the sustenance of humanity. Human beings have outnumbered the rest of living beings and are dominating the globe with technology and the exploitation of resources. Our rising intolerant attitude towards our ecosystem has increased the intensity of disaster and augmented the process of climate change.

Thus, from the above, we can say that an amicable attitude is required to stand true to the tests of courage and tolerance. Such values need to be inculcated through value education in schools and colleges. We should have an empathetic attitude towards the minority section and honesty to speak against the injustice caused by people in the majority. This will help us to reach our targets of inclusivity and collective growth.

## PROPER USE OF SCIENCE IS NOT TO CONQUER NATURE, BUT TO LIVE IN IT.

#PHILOSOPHICAL

SUBMITTED BY: NIKITA PAWAR

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**ESSAYS OF THE MONTH**

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"Orbiting the Earth in the spaceship, I saw how beautiful our planet is. People, let us preserve it and not destroy it!" The request was made by Yuri Gagarin, the first man on Earth to travel into space. From the 20th century, when this was said by Yuri, to today, we have made advancements in the scientific field. From human-like robots to drones delivering food at the doorstep to gaining evidence about faraway planets, humans have achieved things which were unthinkable a few decades ago. Our scientific strides have changed our lives considerably.

Humans lived in caves and were hunter-gatherers; slowly, settlements developed, and along with it, science also progressed. Previously unknown things became known, like the Earth being round not flat, that plants also have life, and Darwin's theory of evolution explained human evolutionary poems. From cave dwellers, we've started living in AI homes. Science has aided humans in discovering life-saving medicines, and advancements in biotechnology are touching new heights every day. With the help of AI, warfare strategies are totally revolutionized. Now, instead of soldiers, robots can be deployed on the borders. Precision targeting is being used for attacking enemy targets through missiles. In the financial sector, cryptocurrency has enabled seamless transfer of money from anywhere.

Research is underway to open space tourism to common people and if possible to establish human settlements on Mars. Human beings are inquisitive creatures, and our scientific will lead to another, but here the question arises: is this all sustainable? Are we not trying to overpower nature by these discoveries and trying to undermine its role? Let us try to understand this. Recently, there were massive floods in Bangalore, India's IT capital. Life came to a standstill. People had to wait in traffic on waterlogged roads for hours to reach the office. Apparently, the dilemma was, in the office, they work to develop applications which will enable delivery in minutes. In this case, we can clearly make out that in front of nature's rage no one is superior.

It is true that science has made our life easier, but we fail to understand that science has sprouted from nature itself. Science is not something that humans have developed single-handedly. Nature and Science go hand

in hand. Till the time our scientific discoveries were in line with nature's limits, use thrived, but as we overstepped our limits, we are suffering from nature's ravages. It does not come as a surprise that whatever natural, climatic catastrophes we are facing today are man-made. Humans have given primacy to their own needs by neglecting and disturbing the natural balance of researches in the name of science. As a result, we've warming, ozone layer depletion, rising CO<sub>2</sub> levels, rising level of ocean waters, extinction of flora and fauna, frequent floods and droughts, extreme weather events, space debris, etc. An American author once said a very true thing that "After one look at this planet any visitor from outer space would say – "I want to see the manager." We humans are the managers of this planet. No one else, but we have to maintain the proper balance between nature and our needs; otherwise, nature will take its revenge. After all, nature can survive without us, but we cannot survive without nature.

So, what is the proper use of science is what we need to understand. The first thing which we need to do is to get away from our self-interest and self-fulfilling prophecies to take a look at Mother Nature. We need to get right everything we have done wrong to nature. Science has made the movement faster by reducing the travel time. It is through cars, railways, airplanes, etc. But, this has posed a problem of pollution. We have to search for ways to make our travels eco-friendly. The e-vehicles need to be popularized, and new technologies should be developed to make affordable electronic vehicles.

Science can be used to harness renewable energy such as solar power, wind power for judicious use of resources.

Science can be used for making climate-resilient seeds and crops and to improve soil fertility. Science can be used to find effective solutions to rising CO<sub>2</sub> levels in the atmosphere and depleting ozone layer. Science can be used to develop technologies which will make life easier for disabled. Science and its use are not bad in itself. It depends on how we use it. If we use science in harmony with nature, it will reap benefits. 'Excess of anything is bad,' and science is no exception. Today, we are facing a paradox – we are searching for life on other planets and galaxies, meanwhile, we are destroying life on our planet. Nature's destruction is our destruction, so how do we get this balance correct between science and nature?



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**ESSAYS OF THE MONTH**

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We can do it by using science for only those purposes which are in sync with nature. Science should not be useful only for humans but for animals and plants too. We need to shin all those technologies which benefit us but threaten these poor creatures.

We have already done our share of destruction by making many species go extinct by destructing their habitats in our fruitless pursuit of scientific advancements. Now, it's high time to less than have their homes. The eco bridges are one step toward this as many animals get killed while crossing the bridge after being hit by trains and vehicles. The sustainable developmental Goals are also another step in this regard. There should be development and development in science but it has to be sustainable because after all this land, this water, this air, this planet. The use of Artificial intelligence can help us in predicting the consequence of any event. This will help us minimize damage to the environment. With the advancements in

science, humans have come to think of themselves as owners of the planet but what we fail to understand is that we are very-very small creatures in front of nature.

Our ancestors grew with nature, but we are growing out of nature. Indians have always been for winners in scientific inventions from ancient times, and we are also a culture who never and worship nature and its part of our age-old civilization. This harmonious relationship which we have showed with nature is the need of the 21st century. In the 21st century, our scientific developments have reached to such a level that we seem to be overdoing it. It is therefore important to draw a line where we need to stop. We have to make sure that our actions do not have a negative impact on nature. We need to understand that because we all share this planet, we have to learn to live in harmony and peace with each other and with nature. This is not just a dream or an abstract thought, but a necessity.

## **POVERTY IS THE PARENT OF REVOLUTION AND CRIME.**

#SOCIAL ISSUES

**SUBMITTED BY: MEGHNA CHAKRABORTY**

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"When Elon Musk earned millions of dollars after selling

In a speech now known as 'The Grammar of Anarchy', Dr. Ambedkar was prophetic in

his observations. He was addressing the Constituent Assembly after concluding the process of drafting the constitution. Dr. Ambedkar remarked that India would soon begin a "life of contradictions." While the value of the maxim 'one person – one vote' would be followed in the parliamentary process, there would continue to be gross inequalities in society. He accurately organized that political democracy – the institutions of government and

the rule of law, for example – would remain incomplete without social and economic democracy. A constitution and the systems or rules that it upholds are thus only as good as the people in charge of implementing it and those living under it.

These observations remain very important. In the absence of good governance that promotes growth alongside the fair distribution of burdens and privileges, there will be rampant poverty in society. Despite being the fifth-largest economy in the world (despite its recent colonial past), India is home to the largest number of the poor in the world.

The new concept of 'multidimensional poverty,' as popularized by the UNDP, demonstrates that poverty does not have to be seen in absolute terms of a low income level, caloric intake, etc. Poverty can also be understood in terms of deprivation of basic needs, assets, opportunities, and capabilities (an insight provided by Amartya Sen).

Such forms of deprivation result in a slippery slope that pushes people towards extreme measures. They may seek revolution – overthrowing the very system that has resulted in such inequities and grievances. They may also turn to crime – breaking the law for personal interest, often with harsh consequences. Both these measures disrupt the social contract that lies at the bedrock of the modern state and society.

To trace this process of poverty breeding revolution and crime, one must explore 'why' and 'how' this takes place. At the most rudimentary level, poverty creates insecurity. A person begins to feel anxious and afraid – "Will I be able to put food on the table for my family tomorrow?", "Is my entire way of life going to change? Will I not be able to pursue my dreams anymore?"

Such insecurity loosens the grip of social norms and respect for the law. Desperation can normalize extreme measures. It may start small, such as setting aside small amounts of one's organization's money in a private drawer. The thought process could be – "Is it really stealing? They do not pay me enough to make ends meet. This is justified." On the other hand, such cognitive patterns may become embedded in society itself. The tragic deaths during the recent West Bengal Panchayat Elections show how unemployment and poverty can lead to horrific political violence to secure access to public services and funds.

These are not the only kinds of crime that poverty can lead to. Poverty may also imply perceptions of relative deprivation compared to other groups. This can lead to frustration, which then feeds into biases and prejudices towards other communities.

Insecurity and envy may set off a chain reaction of misinformation, stereotyping, and finally, hate speech and communal rioting. These crimes signify a general breakdown of order and harmony.

Such a cycle was witnessed regarding Jews in European countries in the early 20th century. As minorities in different countries, the Jewish community was highly enterprising and showed resilience. Their entrepreneurial spirit resulted in the accumulation of wealth over time. This sparked resentment in other groups, especially

during the inter-war period of economic hardship in Germany when poverty was widespread. Anti-Semitism first led to terrible crimes against Jews and then to a revolutionary takeover of the Weimar Republic by Hitler's Nazi Party.

A similar epochal revolutionary moment took place in the USSR from the late 1980s, which very soon led to the unthinkable – the collapse of the USSR and the end of the cold war.

An overwhelming focus on heavy industries and capital goods, coupled with consistently high defense – military expenditure, had created a paradox. The USSR was an industrially developed, technologically sophisticated state with a class of highly skilled professionals alongside general poverty among the masses. When Gorbachev's policy shifts of perestroika and glasnost exposed the people to the prosperity and comforts experienced by the citizens of the Western bloc, there was much public anger.

It led to a loss in faith in the Soviet State and the model of economy and polity that it upheld. No longer were the people ready to sacrifice their interests and live in poverty. They too wanted a chance at a better life, and they were willing to risk a revolution and its concomitant uncertainty to escape deprivation and develop their full potential.

Notwithstanding all of the above-mentioned ways in which socio-economic poverty gives birth to revolution and crime, there is another dimension that is often neglected.

Poverty does not only imply inadequate access to needs and opportunities. It also signifies moral impoverishment or the collapse of integrity. Individuals and Institutions lacking a democratic spirit, commitment to justice, principles like honesty and empathy are also poor albeit in a very different way.

This is brought out by the fact that the crimes which have grabbed headlines in the recent past one also those committed by the affluent.

Fugitive economic offenders who have caused immense harm to the Indian banking system, the rule of law, and the general public do not do so due to socio-economic

poverty. Vijay Mallya and Nirav Modi can take recourse to no other explanation than complete moral bankruptcy.

The absence of wisdom, self-regulation of one's ego, and the lack of compassion for others make some people view the law as something only to be flouted for private gain. On the other hand, institutions also demonstrate disrespect for law and for the will of the people or public interest.

An example of this is the military junta in Myanmar that carried out a revolutionary coup against Aung San Suu Kyi's elected government. The junta demonstrates absolutely no grasp of 'Raj Dharma' which according to Kautilya motivates the protection of one's subjects like one's children. Their coup set the clock backwards on democracy in Myanmar and establishes how value poverty in the rulers spells ruin for all.

As James Maxwell has said, "No nation can rise above the level of competence of its leaders."

What then is there to be done to break this cycle of poverty, revolution, and crime? Dr. Ambedkar, after

presenting the problem, put forward the solution as well. 'Liberty, equality, fraternity' is the inseparable Trinity that must be upheld in the minds of the people and in governance as a whole.

The state's obligation is to take a proactive, maximalist approach towards justice and equity for all. It must root out the socio-economic poverty that "corrupts national consciousness" (Ambedkar) thereby making crime and revolution possible. However, the most important element is that people must uphold human dignity and diversity thereby laying down the foundations for an enriched life and prosperous society.

The state's obligation is to take a proactive, maximalist approach towards justice and equity for all. It must root out the socio-economic poverty that "corrupts national consciousness" (Ambedkar) thereby making crime and revolution possible. However, the most important element is that people must uphold human dignity and diversity thereby laying down the foundations for an enriched life and prosperous society.

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